125

TWO YEARS IN CALIFORNIA

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UNITED STATES OF AMERICA.

Map of
CALIFORNIA
1876.
OREGON
IDAHO
PACIFIC
Pelican Bay
Pt. St. George
Cresent City
Happy Camp
Orleans
Trinidad
Arcata
Humboldt Bay
Eureka
Table Bluff
Ferndale
Petrolia
Hydesv.
Pt. Gorda
Mendocino City
Albion
Manchester
Klamath L.
Henly
Klamath
Yreka
Ft. Jones
Martins Fy
Gazelle
Capell
Yocumville
Petersburg
Portuguee
Lewiston
Junction Cy
Weaverville
Douglas Cy.
Shasta
Redding
American Ranch
Cottonwood
Red Bluff
Tehama
Chico
Durham
Nelson
Biggs
Gridley
Oroville
Moores
Colusa
Yuba City
Marys V.
Lava Beds
Goose L.
Willow R.
Ft. Bidwell
Lake City
Cedar V.
Eagleville
Burgettville
Ardenville
Hayden
Susanville
Janesville
Greenville
Milford
Honey L.
Taylorville
Sherwood Val.
Calpella
Ukiah
Clear L.
Geysers
Coast Range
Hermitage
Cloverdale
Cloverdale
Sycamore
Sutters St.
Calistoga
St. Helena
Healdsburg
Oak V.
Sacramento
Davysville
Napa
Pages
Vallejo
Cordelia
San Rafael
Drakes Bay
Saucelito
Golden Gate
San Francisco
San Mateo
Redwood Cy.
Mayfield
Santa Clara
San Jose
Oakland
Haywood
Pleasanton
Livermore
Midway
Ellis
Banta
Stockton
Lathrop
Ceres
Oakdale
Farmington
Milton
Peters
Lone City
Hicksville
Latrobe
Placerville
Folsom
Roseville
New Castle
Clipper Gap
Colfax
Alta
Emigrant Gap
Cascade
Truckee
Boca
Summit
Junctionville
State Line
L. Tahoe
Glenbrook
Carson City
Dayton
Virginia Cy.
Franktown
Washoe Cy.
Verdi
Reno
Camp
Clarks
Desert
Wadsworth
Mirage
Hot Springs
White Plains
Browns
Granite Pt.
Humboldt L.
Lovelocks
Oreana
Rye Patch
Humboldt H.
Mill City
Raspberry
Rose Cr.
Winnemucca
Colconda
Iron Pt.
Stone House
Argenta
Shoshone
Beowawe
Cluro
Palisade
Carlin
Moleen
Elk
Osino
Peko
Halleck
Tulasco
Humboldt Wells
Independence
Humboldt Riv.
Mineral Hill
Eureka
Stillwater
Monoville
Mono L.
Waterford
Cressey
Yosemite Val.
Sierra

NEVADA
ARIZONA
OCEAN
Santa Cruz
Gilroy
MONTEREY B.
Pajaro
Hollister
Salinas
Tres Pinos
Monterey
Pt. Pinos
CAMELO B.
Soledad
Rancho
Pt. Sur
Pt. Gorda
San Antonio
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Cambria
Santa Margarita
Morro
B. of S. LUIS
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Pt. San Luis
Suey
Olivera
La Graciosa
Pt. Argulla
Pt. Conception
La Cruces
Los Alisos
Santa Barbara
Carpentaria
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San Miguel
Santa Rosa
Santa Cruz
S. Buenaventura
Wynema
St. Fernando
St. Fernando Tunnel
Soledad
Los Angeles
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Temecula
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Mohave Cy.
Camp Mohave
Colville
C. Eldorado
Las Vegas
Death Valley
Owen L.
Olancha
Independence
Big Pine
Owens V.
Kings Riv.
Kingston
Goshen
Tulare
Tipton
Alita
Delano
Paso
Lerdo
Kernville
Bakersfield
Kern R.
TULARE
LAKE
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TWO YEARS

IN

CALIFORNIA.

BY

MARY CONE.

WITH ILLUSTRATIONS.

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TO

COL. JOHN MILLS,

THIS BOOK IS INSCRIBED BY

THE AUTHOR,

WITH REGRET THAT THE TRIBUTE IS NOT
MORE WORTHY OF HIM AT WHOSE
FEET IT IS LAID.

PREFACE.

THE "Star of Empire" that has been so long traveling on its westward way has at last reached the end of its journey, and taken a fixed position. It stands over a fair land; the best, perhaps, all things considered, that it has looked down upon in all its course. Not that perfection is found even here. It is the law in this world that good shall never be unmixed. But, in the case of California, when the advantages and disadvantages are laid in the opposite sides of the balance, the former will be found to weigh down the latter to a degree that is scarcely to be seen elsewhere.

There are just now important reasons for directing attention to this comparatively new State. These are found in the disturbances that are now prevailing in the commercial and industrial interests in the eastern and older parts of the country. The wheel of fortune is revolving with unusual rapidity. Those who were at the top yesterday are at the bottom to-day. To those who are by these changes despoiled of home and of goods, new conditions may be desirable, and they may be looking with eager eyes to see where they can best find other foot-holds from whence they can make a fresh

start in the race of life. To such — to all who for any reason desire to go and seek their fortunes in the West, California presents strong attractions. That these attractions are appreciated by many is proved by the fact that during the year 1875 sixty thousand emigrants found their way into the State — a greater number than had ever before gone in the same length of time.

The permanency of first impressions is strikingly shown by the very common impression in regard to California. It was first known to the world as a gold-producing country, and men are slow to learn that while gold continues to be a very considerable product it is far exceeded in value and extent by other industries. The gold product is now principally obtained by quartz-mining, which requires large capital to conduct it. There is no longer any furor connected with the business, nor are fortunes now made in a day. Mining is conducted as a legitimate business, of which the average yield has been, for the last few years, about twenty millions of dollars per annum. As a bullion-producing State, including gold and silver, California has fallen into the second place — it is outranked by Nevada, which, in 1875, produced more than twice as much as the Golden State. But the increase in agricultural products is more than an offset for the falling off in this direction.

The increase in agricultural products has been so rapid as to seem almost a marvel. Until 1861 flour was imported for home use; now California yields the largest wheat product of any State in the Union, and is second only to New York in the production, of fruit. The yield in wine for 1875 was ten millions of gallons. One-fifth of all the wool grown in the United States is furnished by California; during the current year it is estimated that the product will reach the enormous amount of fifty millions of pounds. Then, the possible industries are so many and various that it would seem impossible for anybody to fail to find something to suit his taste and his capacities.

There has been much that was partial and untrue written in regard to California. The writer of the following pages lays no claim to infallibility, but does claim that during the two years spent in California, she made an honest effort to see things as they really were, and has tried to describe them as they appeared. Bought up by no corporation, never dead-headed, protected by insignificance from all ovations whatsoever, there was nothing to cast a glamour over the eyes or bias the judgment except so far as the loving-kindness of friends brought content to the heart, and opened pleasanter and fuller facilities for seeing and knowing. Great care was taken to examine and compare testimony, and sift out, if possible, the chaff. To what

extent the effort has been successful, those must judge whose superior knowledge enables them to decide.

The author takes pleasure in acknowledging her indebtedness to "The Natural Wealth of California," by T. F. Cronise, for valuable information embodied in this work; also to a lecture by the Hon. S. Garfield for hints in regard to climate, and to The California Immigrant Union for the prompt and generous manner in which they have responded to appeals for aid.

M. C.

Marietta, Ohio, April, 1876.

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TWO YEARS IN CALIFORNIA.

CHAPTER I.

CLIMATE.

TEMPERATURE and rainfall are the essential elements of climate. This twofold influence affects so potently the conditions of life in California, that some consideration of the subject, in the way of a preliminary, seems quite in order.

That isothermal lines stretched across the continent do not coincide with parallels of latitude is a fact well established, and yet is more generally accepted than understood. The northern end of the island of Vancouver, in latitude 51°, has the same winter temperature as Norfolk, Va., in latitude 37°. In Olympia, at the head of Puget Sound, latitude 49°, bouquets containing fifteen or twenty varieties of flowers are gathered from the open grounds to ornament the Christmas tables, and the inhabitants are obliged to send to the Aleutian islands, eighteen hundred miles away, to get their supply of ice for summer use.

San Francisco, in latitude 38°, has a mean annual temperature of 56° Fahrenheit. All that is implied in this is not at once evident. There are but eight degrees difference between the mean temperature of the summer and

the winter. Although there are occasional frosts, the ground is never stiffened by cold, and ice is never formed thicker than the glass of the window, while delicate exotics, such as fuchsias, calla-lilies, verbenas, pinks, geraniums and roses, continue to delight the eye and gladden the heart by spreading out their beauty in the open grounds all the year round. Even when the frost comes it does not seem to affect the flowers and plants as it does elsewhere. Jack Frost may sprinkle the rosebush all over with his white crystals, and almost encase the pinks and lilies in a covering of white, yet when the sun has compelled him to withdraw and has scattered his handiwork, the flowers hold up their heads as proudly and wear their beautiful tints as gaily as though nothing had happened. It may be that enough caloric has been stored away in the earth about the roots, while the sun was shining, to keep the plants from being chilled, and they have, as a consequence, an unusual power of resistance.

In all climatic conditions the difference between the eastern and western sides of the continent is so great that there are few observers so superficial as not to inquire, What occasions this dissimilarity? Why does nature smile so much more benignantly upon the latter than the former? The fact that said nature is of the feminine gender, and ought not, therefore, to be expected to have any better reason than "because" for any way of working that she chooses, is scarcely philosophical enough for those who indulge in the luxury of thinking. When the matter is investigated it will be found, as is often true, that where there seems to be only a whim there is actually a reason. In the present instance this cause is doubly blessed, for it

has two reasons for being. One of these is in the air, the other in the water. Either of these forces working alone would be potential enough to bring about great results; entering into partnership and uniting their capacities, they accomplish what seems to be almost a miracle. In the two influences, the direction of the winds and the Japan current, will be found ample reason for the great difference in the temperature upon the same parallel of latitude, on the two sides of the continent. Working with or against these principal powers, there are many local causes, such as the elevation or direction of mountain ranges, and the occurrence of passes or openings through them, which turn aside or check, or increase, the strength of the winds, and so occasion partial departures from general laws. Throwing out of consideration these exceptional cases, it may be well to consider, more in full, the workings of the two grand and overmastering causes.

It is well known that heat expands atmospheric air and makes it lighter, and that the lighter air always shows a disposition to rise above the heavier. Hence when the sun shines vertically, as at the equator, the air becomes heated and ascends, while the colder air from the north and south flows in to fill the vacuum. If the earth were motionless, there would be, consequently, surface currents from the north and south toward the equator, and upper currents from the equator toward the poles. But as the rotary motion of the earth from west to east is communicated to its atmosphere, and as in the equatorial regions, where the process of rarefaction is most active, this eastward motion is necessarily the greatest, the combined effects of this rotary motion and the movement to and from the poles is

to give the air-currents an oblique direction, those on the surface tending from the northeast to the southwest, and the upper currents from the southwest to the northeast. But this latter wind will not be felt anywhere near the equator, because it is an upper current, and so continues until, by a gradually cooling process, it parts with enough of its caloric to come down and take its place as a surface current. In the winter, when the sun is south of the equator, this result will happen in about latitude 30°. In the summer, when the sun is north of the equator, this southwest wind does not come to the surface below latitude 65° or 70°, unless it chance to meet with some unusual obstruction. These several causes working together — the action of the sun's rays, the turning of the earth upon its axis and its revolution round the sun, together with the inclination of the earth's axis — would be expected, reasoning *a priori*, to produce exactly such results as are actually found to exist, viz.: calms, variable winds and vertical currents about the equator, northeast winds from there to latitude 25° or 30°, variable winds where the southwest and northeast winds strive together for the mastery, and northwest winds beyond the scene of conflict.

The Pacific ocean being larger than any other even, spherical surface upon the face of our globe is, as a consequence, less affected by irregularities and disturbances from without. Like all great bodies, it has such confidence in its own power that it can afford to be indifferent to insults that may be offered by outside insignificance, and remain placid under almost any provocation. Hence it is able to show the legitimate influence of solar heat and the

earth's motion in producing atmospheric and oceanic currents. As the prevailing winds of the temperate zone are westerly, that region which is blown upon by the winds that come over this great, calm, placid and equable ocean should have a milder and more equable climate than countries which have a different geographical position. Precisely this result is found to take place.

From the equator to latitude 12° or 15° there is but little wind, and that is variable. From thence to latitude 25° the northeast trades prevail. In winter the upper southerly currents begin to come to the surface at about this point, and as they move in a direction opposite to the northeast trades, they beat these back and produce a belt of variable winds that extends to about latitude 32°. Beyond this limit, northward, the southwest winter winds, which have now reached the surface in full force, sweep forward regularly when not obstructed by surface elevations. These southwest winds, coming over the even, tranquil surface of the great Pacific ocean, bring with them the mild, equable temper which the ocean has imparted to them, and make cool or warm, according to the needs of the case, whatever part of the continent they reach. In winter the ocean is warmer, and in summer cooler, than the land contiguous to it, so that in either instance these winds are messengers of comfort to those on the land, bringing heat or cold according to the season.

As the sun moves northward over the equator, and spring gives place to summer, the southwest winter winds gradually die out, or, rather, go northward, leaving first those places where they first appeared, which is about latitude 32°. In the autumn their course is reversed, their

journey commencing in the opposite direction. They strike the earth far to the north, and come down, as the sun gets farther and farther south of the equator, until they sweep along the whole coast, as far as latitude 32° again.

The southwest winds having followed the sun in its movement toward the south pole, the coast is clear for the northwest winds to show their power. They improve their opportunity, and from June till October have matters pretty much their own way. These winds come from a high latitude, and over a small, cold ocean. As a consequence, they are both cool and dry, and so have power over quite a range of latitude, to modify the influence of a nearly vertical sun, and reduce the temperature from what it would be without their influence to a mean of about 64° in the daytime, and make the nights especially cool and delightful. When the wind, however, is directly from the north, and comes down over the heated valleys lying inland, and has no chance to be modified by the influence of the ocean, it is a withering, scorching blast, that feels as though it had come straight from the mouth of a furnace.

The other influence that coöperates with these comforting winds, and helps them to produce the delightful climate of the Pacific coast, is the Japan current.

The nature and influence of the gulf stream in the Atlantic ocean have been long understood. It is due to its beneficence that Great Britain, lying between 50° and 59° north latitude, is redeemed from the cold and sterility of Labrador, which lies, in part, in the same latitude. It is a well-known and established fact that the climate of all Western Europe is far more amiable and kindly than that of countries lying in corresponding parallels of latitude on

the eastern coast of America, and that to the potent influence of the gulf stream this difference is due.

The power of the Japan current is as much greater and more beneficent than that of the gulf stream as the ocean in which it has its origin is grander and more placable than that which is the home of the gulf stream. The current takes its rise in the Indian ocean, being heated by the vertical sun of the tropics, and flows northward along the eastern coast of Asia, warming the countries it finds on its way, and giving particular attention to the comfort of those who dwell on the islands of Japan. At length it comes in contact with the peninsula of Alaska and the Aleutian islands. Breaking with great force upon these obstructions to its onward movement, the current is divided. After the division, one part moves northward through Behring's Straits, and, probably, helps to make the open polar sea. The other part comes down along the western coast of America, hugging it closely, and generously imparting warmth and comfort as it flows along toward the south. The region bordering upon Puget Sound is blessed beyond any other by this beneficent power. Twice each day, with the rise of the tide, immense quantities of this warm water flow into Puget Sound through the straits of Juan de Fuca, and, like the steam-pipes through which steam is sent from a furnace over a house, the tepid water continually dispenses its heat, and so warms the country that flowers can bud and bring forth blossoms to beautify the Christmas tables; hence the climate of the country is altogether unlike what its contiguity to the north pole would make it reasonable to expect. But the beneficence of the Japan current does not stop here.

Like the apparatus in our congressional halls, it accomplishes a double purpose. That which serves for heating in winter serves also for cooling in summer. There are but two degrees difference in the temperature of the Japan current in winter and summer. The winter temperature is 50°, that of summer 52°. It is, therefore, greatly cooler in summer than the surrounding atmosphere; and whereas in winter it warms, in summer it cools, the region round about.

So great is the volume of this Japan current, and so economical is it in the use of its resources, that in all its long journey the variation in the temperature of its waters is comparatively slight. The distance between Queen Charlotte's Islands and San Francisco is two thousand miles; yet throughout the whole the difference in the temperature of the water is but two degrees. Thus the entire western coast of North America has an almost equal share in the benefits of this mighty ocean stream.

CHAPTER II.

RAIN-FALL.

THERE is not the same equality in the amount of rain-fall, or precipitation of moisture, on the Pacific coast that there is in temperature. Going from the north to the south, the amount diminishes in a direct ratio. In Washington Territory and in Oregon the clouds get into such a habit of weeping that it seems to be their normal condition, but they "dry up" more and more toward the equator until in southern California they make but very stingy deposits.

It is pleasant to know that, though "the wind bloweth where it listeth," and seems to be altogether a lawless thing, and the rain appears to come in an entirely independent and irresponsible manner, when we look into the matter we find that both are chained to the chariot of Him who is above them both, and who has ordained laws which they can neither transcend nor transgress.

Even in the seven hundred miles through which California extends, north and south, the difference is so great as to excite inquiry in the minds of the most unthinking.

In Shasta city in northern California, between November and April, the rain-fall in 1871–2 reached eighty inches, while in San Diego, in the southern extremity of the State, during the same time, it was only ten inches. There are seasons when it even falls short of this. San

Francisco, situated between the two extremes, has an average rain-fall of twenty-two inches. Local causes sometimes occasion a departure from general rules and increase the disparity. In Hoopa Valley, Klamath county, the enormous quantity of one hundred and twenty-nine inches is reported to have fallen in one season, while at Fort Yuma, in the southeastern extremity of San Diego county, the average annual rain-fall is only about three inches, and in exceptional seasons it is even less, while there are said to be places in the State where there is no rain at all.

It may be interesting to get at the secret of these apparently strange differences.

That secret is bound up in the same bundle which contains the mysteries in regard to the direction of the winds, and the causes which control them. Untie the one, and the other is found.

All the western portion of the continent derives its moisture from the Pacific ocean. The wind sweeping over the sea gathers up the particles of moisture and carries them in its bosom until some extraneous influence is brought to bear upon it to compel it to give up its treasure. Then, as it goes hither and thither, it scatters these riches, and therewith makes the earth glad and causes it to bring forth, that it may give seed to the sower and bread to the eater.

It is a well-known fact that the capacity of atmospheric air to absorb and retain moisture is increased or diminished in proportion as its temperature is higher or lower. The prevailing winds of the temperate zone coming from the west, and sweeping, as they do, over the broad expanse

of the Pacific ocean, lap up the water, and carry it on their wings until, as they go northward, they become so chilled that they are obliged to deposit it. In winter, when the sun is south of the equator, this point is reached at about latitude 30°, where the deposition of moisture is begun, and as the winds get cooler in proportion as they get further and further away from the sun and toward the north, the precipitation of moisture increases in a direct ratio with the distance, until by the time Puget Sound is reached the winds are found to be in an almost constant state of precipitation. This deposit is in the shape of rain in the valleys and lowlands, and snow in the mountains.

On the other hand, in the summer, when the sun is north of the equator, the scene of this cooling process is moved further north, and the region that has been so generously supplied with rain during the winter gets none at all in summer, because the atmosphere does not become sufficiently cooled off to make any deposits until it gets quite far to the northward.

South of latitude 42° summer showers are almost unknown, saving in exceptional circumstances, where mountain ranges attract clouds and cause precipitation. In the Yosemite valley showers are frequent, even in the summer months. Another cause acts in conjunction with the one already mentioned. In summer, as has been before stated, the prevailing westerly winds are often deflected, and sometimes overpowered, by winds from the north. These north winds not only have no moisture to spare, but they are ravenously thirsty, and so gather up and appropriate every particle of moisture they find on their way.

Any one who has been long enough in California to be

at all familiar with its climatic phenomena does not need to be told of the withering, blasting effect of the north wind. It not only dries up vegetable matter and sucks the very life out of it, but animal life is also affected. Even man, the aristocrat of creation, is obliged to succumb to its influence. It penetrates the very marrow of his bones, and makes him feel that his birthright renders him an Ishmaelite indeed, whose mission it is to be at enmity with his race. Any one who can show an amiable disposition, and be ready to do his needy fellow-creature a kindness on the third day that the wind has been in the north, may be set down as one among a thousand! Fortunately these north winds seldom continue more than three days in succession, or there is no knowing to what horrible extremities the people would be driven.

On the banks of the Sacramento, in the month of May, the writer saw the leaves of sycamore trees, which had unfolded and almost reached maturity of size, scorched and withered and killed, as totally blasted as though a fire had been kindled beneath the trees and the flames had reached and destroyed them. This was the work of a north wind which had prevailed a week or two before. And woe to the unfortunate sufferer who has a rheumatic affection lurking anywhere in his bones! The north wind will be sure to search it out and waken it into activity. Let such an one get on the south side of the house, and bar the door and shut the window, if perchance he can keep out the enemy, for, if he do not, if he be once found, such torments will rack his bones as demons might delight to torture their victims with!

The two chief elements of climate, temperature and

rain-fall, have now been considered, and enough said to show the general laws by which they are governed and the influence they exert. There remain other facts and considerations that go to show why the climate differs so widely in the different parts of California.

There are many local causes, such as elevation, or protection by means of mountains, or trend of coast, or other peculiarity that may affect a given locality. This is true to such an extent that it is impossible to give any general description of the climate of California that will be correct and satisfactory. The locality must be defined if a true and authentic account would be given; still, so far as it is possible to generalize, it is well to do so. California may, therefore, be said to have two climates,—the land and the sea climates. The former is dry and hot from April to November; the latter damp and cool. If one wishes to know the climate of a given place, the first thing to be ascertained is, to which of the two climates the place is subjected. Those parts of the State that are contiguous to the ocean are, of course, under the jurisdiction of the sea climate, and consequently have no oppressive heat and no disheartening cold. They are kept in a state of perpetual comfort by the coolness and evenness of the ocean temperature. The water along the coast, under the influence of the Japan current, stands at from 52° to 54° all the year round. This equability is imparted to the atmosphere so that it is preserved from any great variation of temperature.

In San Francisco the mean difference between the summer and winter temperature is only eight degrees. This is only one of many marked peculiarities in the climate of

this queen city of the Pacific coast. Take it altogether, the climate is quite anomalous and difficult to be understood by those who have not had the chance of becoming personally acquainted with its peculiarities. The ladies wear their fur collars all the year, and gentlemen do not give the moths an opportunity to make feasts of their overcoats, because they are in almost constant requisition. Even on our nation's birthday, a heavy blanket-shawl would be essential to comfort if a ride in an open buggy were indulged in. In such a climate it does not seem so strange as it sometimes does in the sweltering heat of an eastern Fourth of July, that our fathers ventured to allow themselves to get warmed up and excited enough to pledge "their fortunes, their lives, and their sacred honors" to any cause whatsoever, if that cause was to be sustained by fighting! And yet, in this same place, where in July and August you draw your fur collar about your neck as closely as possible, and, if you are intending to cross the bay, put an additional pin in your blanket shawl, delicate exotics blossom in the yards perennially. There is no time when you cannot gather a bouquet of roses, geraniums, verbenas and pinks, while you see in almost every dooryard such bunches of calla-lilies, with their large, trumpet-shaped blossoms, arrayed in the color, if not the odor, of sanctity, as would delight the imagination of an eastern florist to even dream of. How are these two sets of circumstances — these perpetual furs and perpetual flowers — these blanket-shawls in July and greenness all the year to be reconciled and accounted for?

San Francisco is in the debatable land where the sea and the land climates always strive together, with victory

always inclining to the side of the former. It is situated on a peninsula, with the ocean on the west and the bay of San Francisco on the east, thus affording an unusually good opportunity for the wind to sweep over it and do whatsoever it pleases. The Golden Gate and the bay of San Francisco are the only effectual break—the only facile communication between the coast and the interior valleys. In summer, when the valleys are heated up and vacuums are occasioned by the rising of the hot air, the cool wind from the ocean, in its haste to rush in and fill the vacancies, gets very much in earnest, and blows over the peninsula in a tempestuous manner. The hotter it is in the valleys the harder the wind blows, so that, when there is an incipient hurricane in San Francisco it may always be inferred that they are having a hot time of it in the valleys. On account of this connection between the ocean and the interior valleys by means of the Golden Gate and the bay, San Francisco is more exposed to the wind during summer than any other place on the coast. Even Oakland, but eight miles distant, on the other side of the bay, has a perceptibly milder and more propitious summer climate, because by the direction of the coast it has some protection from the power of the ocean winds. There are many places on the coast for which nature has kindly provided some shield by projecting a headland, or indenting a bay, so as to secure at least partial immunity from the rough blasts from the sea. Santa Cruz is one of these favored spots. Situated on a cove in the bay of Monterey, it is protected by headlands from the roughness of the ocean winds, and made so attractive that it has become a place of much resort, insomuch that it is called the Newport of California.

Following the coast down to Point Concepcion, it will be seen that there is a sudden and sharp change in its direction. Instead of the southeastern course it has kept heretofore, it makes an abrupt turn and the trend is almost due east for about seventy miles. As the sea-breeze is from the west, it is apparent that while the trend of the coast is in the same direction, the wind cannot strike it fairly, and yet there can well be enough of its cool, invigorating influence felt to keep the land in a state of perpetual comfort.

Santa Barbara is not far from the center of this favored spot, and has the additional advantage of a southern exposure, which secures an unusual supply of sunshine.

Perhaps the pleasantest characteristic of this coast climate is its equability. Along the coast it is never hot and never cold. There are not many mornings in the whole year when a little fire does not add to the comfort; indeed, there are few mornings when you can really be comfortable without one. Yet, as soon as the sun is up a little way, if you can get yourself under its influence, its heat will be sufficient, and the fire may be permitted to go out.

It may be laid down as a general principle, that whenever and wherever you get away from the influence of the sea-breeze the weather will be warm in summer, oftentimes intensely hot, except where the influence of the sun is counteracted by elevation. In the mountainous regions there are valleys so lifted up and protected that they have climates secured to them so nearly perfect that only a determined grumbler could find fault with them. There is a large extent of country that lies between the jurisdiction of the sea and the land climate, and is affected by both.

The valleys opening into the bay of San Francisco are all subject to this double influence. The heat of the land climate is so modified by the cool breeze from the ocean as to result in a compound that is generally comfortable and pleasant.

The sea-breeze does not seem to be unduly inclined to confine its attentions to the coast. Wherever there is a cleft in the mountain, or an opening made by a river, it pours through and uses its influence to assuage the heat of the inland valleys. It comes in at the Golden Gate without let or hindrance, and as it does nowhere else. It strikes violently against the Contra Costa hills on the other side of the bay. These hinder its further progress in that direction, and it is thus deflected and turned aside. One part of the divided current goes toward the northwest, the other toward the southeast, in both cases following the course of the bay. Hence at San José, below the southern extremity of the bay, the trade-wind or sea-breeze comes as a northwest wind; and at Benicia, on the north end of the bay, it comes as a southwester. Spreading out like a fan, it finds its way into all the valleys and inlets that open into the bay. Everywhere it is invigorating, everywhere health-giving, except in cases where the lungs are diseased or over-sensitive. Then places where it comes in its full strength must be avoided.

The effect of the wind blowing so constantly in one direction is curiously visible in the trees, which, being unable to resist the constant strain, bend so continually before the blast that they at length depart entirely from the perpendicular, and show rather a grovelling disposition for anything that was created to stand upright. Among

the live-oaks in and around Oakland, there can scarcely one be found that has maintained its uprightness in the face of all this opposition. At the point where the wind has fair and full sweep the trees look as though they had been sent for and were going as fast as they could, and all in one direction. Some of them are so nearly horizontal that it does not seem as though it would be a very difficult thing to walk up to the top of them.

As has been before stated, there is a sort of correlation of forces — a balance in trade — between the sea-breeze and the heat in the valleys. Whenever the sun shines with unusual power, and heats up the valleys to an unwonted degree, causing the rarefied air to rise and hurry away, the cold air from the sea comes to fill the vacuum, and makes the greater haste according as the vacuum is greater. This interchange keeps everything in motion, and the wind in San Francisco is a pretty good thermometer for the Sacramento and San Joachin valleys. In September the sun has gone too far to the south to succeed so well in heating up the valleys, and the wind from the ocean has no cause to interfere; hence there is a cessation of its activity, and in that month there is a little touch of summer on the coast. It is uniformly the hottest month in the year everywhere on the sea-coast.

It is a misnomer to call the season winter that alternates with the summer in California. It is a long, bright spring, made so by the rains which are expected in November, but do not always come until December. After a few showers the hills put on their garments of beauty, greenness spreads rapidly over their brown, parched sides, and everything assumes the fresh, inspiring look of spring. The farmers

begin to plow and sow their fields; and the sooner the seed is in after the rains begin the better. In almost every part of the State, in an average season, a wheat crop is secure if the seed is put into the ground in time to have the benefit of the greater part of the winter rain. More rain falls in December, as a general thing, than in any other month. In January there are many bright days when the sky is so serene and the air so pure that it seems to be, and really is, a luxury to live. Vegetation grows rapidly all through the month, and has but little conflict in doing so. There are occasional frosts, but the ground is never stiffened by cold.

Then comes the period between the early and the latter rains. This is sometimes longer and better defined than it is at others, but it is usually measured by the month of February. The latter rains are of vital importance to the crops. The seed is now in the ground, or should be, and its growth and maturity depend in great measure upon the copiousness of these rains. If the latter rain is abundant, the crop may be regarded as secure.

It will be inferred from what has been already said that the rainy reason is not a time of perpetual rain. The fact is quite otherwise. There are often many days in succession without a drop of rain, and the brilliancy of the skies and the purity of the atmosphere are something wonderful, and beautiful as wonderful. Those who have made their only visit to California during the heat and dust of the summer, it is safe to say, know but little of its beauty and its glory.

The air, purified by the rain, becomes so transparent that distance seems to be annihilated. If it were really true that the gates were ajar, it would seem as though one could actually look within and see the heavenly city,

"Jerusalem the golden." It was the writer's pleasant fortune to be in Oakland for the first time during this season. These strange and wonderful appearances occasioned a state of mind so bordering on ecstasy that the tension was acute, and the effect from excess of pleasure almost painful. Afterward, familiarity made this loveliness less exciting; but no familiarity could ever make such scenes so common that the heart would not lift itself up in glad thankfulness to the great Creator, who not only made the world beautiful, but so stamped His image on the hearts of His children as to make them capable of appreciation. Go where you will on the Contra Costa mountains and the foot-hills back of Oakland, you always seem to look right out of the open Golden Gate to the limitless ocean beyond. Brightness and beauty are everywhere, above, beneath and around you. Life has a new zest and a new meaning given to it when you can breathe such air and look out upon such loveliness; imagination is helped in its conceptions of that "land of pure delight" about whose glories we can only faintly dream here, but about which we hope to know so much hereafter.

There are many of these halcyon days scattered through the winter. In truth, during some winters they are the rule and rainy days are the exception, for the rain has a strong propensity to fall in the night, very benevolently vacating when the night is past, and leaving the "sun to rule by day." The conditions are more favorable for the falling of the rain by night than by day. No matter how heavily laden the clouds are, or how ready soever they may be to discharge their contents, the sun is so potent that it compels them to scatter, and take with them the moisture

with which they are charged. But in the night the sun is out of the way, and the rain-clouds have the field all to themselves. They improve their opportunity, and sometimes pour down the rain without stint or limit. The first winter that the writer spent in California, there was not a day when the rain was continuous, not a day a part of which could not be pleasantly spent out-of-doors. But that was an exceptionally dry winter, as the next was an exceptionally wet one, during which there was at one time three weeks with only four pleasant days in all the twenty-one.

The mean annual temperature varies less in a given range of latitude on the Pacific coast than it does on the Atlantic. Going northward on the Atlantic sea-board, the mean annual temperature is found to diminish one degree for every degree of latitude. But on the western coast there is a difference of but two or three degrees in all the nine degrees of latitude between the mouth of the Columbia river and Monterey. And this difference does not always correspond with the difference in the latitude. Local causes come in to modify natural conditions, and exert other influences. In the interior the climate is greatly diversified. Each valley and mountain side seems to have one of its own.

The rains cease in April or May, and on the coast the trade-winds begin to blow, but they are as yet only in their infancy. Their mature strength is in reserve for July and August, when they hold high carnival. The wind rises every morning about ten o'clock, or a little later, and continues through the remainder of the day. As has been already stated, September is the hottest month of the year

on the coast, because the trade-winds have ceased, and the land is given over to the influence of the sun.

The mean temperature of San Francisco is 56°, it being 60° in summer and 52° in winter. There is scarcely any fall of temperature during the night. Soon after the sea-breeze sets in, in the morning, the mercury falls from 65° to 53° or 54°, and remains very nearly stationary from that time till the sun brings it up the next morning. This operation is gone through with three-fourths of the days during June, July and August. The nights are never uncomfortably warm, as is shown by the temperature. Blankets are in requisition every night in the year. Inland the sun has a better chance for victory, and does not show himself a very merciful conqueror. Away from the reach of the sea-breeze the heat is sometimes terrific. In the upper Sacramento valley, during the summer, the mercury disdains to stop anywhere in the nineties, but goes on up to 100°, to 110°, and even to 118° in the shade! Yet even that degree is more endurable than a somewhat lower degree in other places, on account of the extreme dryness of the atmosphere and the coolness of the nights. There being no clouds, evaporation is rapid, and very soon after the sun is gone down the air becomes cool, and so refreshing sleep can be obtained. In the San Joachin valley, also, when beyond the reach of the sea-breeze, the heat is intense. But, notwithstanding the intensity of the heat, sun-strokes are nearly or quite unknown. There is no authentic account of any case of sun-stroke that terminated fatally. Probably, the dryness of the atmosphere, already referred to, has something to do with this immunity.

Another of the pleasant peculiarities of the climate of

California is, that there are no thunder-showers. There being no clouds to hold the electricity, the country is secure from the celestial pyrotechnics that occasion so much terror among the weak-nerved in other parts of the country. There is an occasional flash of lightning, and the rumble of thunder is sometimes heard. But these come in the winter, when they come at all, and are but distantly related to the terrific explosions which occasion alarm, and sometimes death, elsewhere.

CHAPTER III.

HISTORY.

THE word California, so familiar to our ears, and so pleasant, is of doubtful origin. There have been many speculations in regard to it, and divers discussions, which cannot be brought to any certain conclusion for want of a firm foundation on which to base the theories brought forward. A scholar, learned in Greek lore, suggests that California is derived from the Greek words *Kala-phor-nea*, which may mean either a beautiful young woman or a new country, according to the exigencies of the situation.

Whatever the name may mean, or by whom compounded, it is first met with in a romance, which was once very popular, but is now almost forgotten, and was published at Seville, Spain, in 1510, and entitled, "The Sergas de Esplandian," the Son of Amadis of Gaul. In this book the word occurs three times. One passage reads thus:

"Know that on the right hand of the Indies, there is an island called California, very near to the Terrestrial Paradise, which was peopled by black women, without any men among them, because they were accustomed to live after the manner of the Amazons. They were of strong and hardened bodies, of ardent courage, and of great force. The island was the strongest in the world, from its steep rocks and great cliffs. Their arms were of gold, so were the caparisons of the wild beasts they rode."

This romance was very popular during the quarter of a century that elapsed between its publication and the discovery of this country by Hernando Grixalva, one of the officers of Cortez. It may be that said Grixalva thought

he had found the wonderful island which was described in the romance, and, therefore, gave it the name that of right belonged to it, or he may have bestowed upon it the popular title in order to arrest attention and excite an interest in the country.

The territory which is now occupied by the State of California was discovered and partially described in the year 1542 by Juan Rodriquez Cabrillo, a Portuguese by birth, but in the service of Spain at the time. He also discovered and named the Farallone Islands, which lie twenty or thirty miles outside the Golden Gate, and are known to modern dwellers in that region as immense birds' nests, where the sea-fowls go to lay their eggs, and where, at certain seasons of the year, men follow them in vessels and bring away their eggs by the hundreds of dozens. Cabrillo also named Cape Mendocino, which, however, he called Cape Mendoza, for his friend and patron the viceroy of Mexico. The name was afterward softened down to Mendocino, which it still retains.

For more than two centuries after the country was discovered by Cabrillo the beautiful bay of San Francisco, — the best harbor upon the Pacific coast and the second-best in the world,— remained a *sinus incognitus*. It is so securely land-locked, and the gate is so narrow through which it is entered, that navigators, even when searching along the coast for an inlet, passed and repassed without discovering it. And it is a somewhat singular fact that when it was finally found the discoverers came to it overland.

In 1769 Don Gaspar De Portala, governor of Mexico, in company with fifty or sixty men, started from Sonora to go overland to Monterey. The party went astray, and,

going too far northward for the point which they were seeking, came by accident upon this gem of the Pacific, the bay of San Francisco. They could not, of course, take in at a glance the full value of the prize they had found; they could not fully measure its almost unlimited capacity as a harbor in its wonderful security. But enough was revealed to the discoverers to make them desire to honor it as much as they could, by the bestowal of a name which was much to them, because it was the name of their patron saint. The new bay was therefore called San Francisco, for their great leader and unseen guide.

But the needs of the time did not even yet call into requisition this grand harbor. Six years more were allowed to pass before any use was made of the knowledge so accidentally or providentially acquired, or any steps were taken to secure possession of this important point.

With the light of the present day shining around us, the geographical notions of those who lived before us seem very crude and almost comical. Even the wisest of the men of the last century, were they now living, would need to go to school awhile to get thoroughly posted in the geography of the present day; and, going backward in the centuries, the case waxes worse and worse. In the Odd Fellows' library in San Francisco there is a copy of a map of the world, published in Venice in 1554, in which the continent of North America is represented as uniting with Asia. The river Colorado is made to rise in the mountains of Thibet, and then wander about in a bewildered sort of way till it has traveled more than fifteen thousand miles in getting across the continent, when it is allowed the privilege of emptying itself into the gulf of

California, the place for which it has been seeking so long! Knowing where the river must disgorge, and knowing scarcely more than that, these geography-makers had to do as the naturalist does with his bone when he has but one — make up a whole that will fit the part already possessed.

With geographical knowledge in this mixed-up condition it is not strange that California was for a long time thought to be an island. After that error was exploded it was succeeded by another. The whole country was said to be a peninsula fastened to the continent by a "narrow neck of land." At length, in 1771, Father Bogart published a book on California, in which he so clearly demonstrated that it was a regular and inherent part of the American continent, that its rank as such has never since been called in question.

A high motive has wonderful power to lift up the heart and bring about the best results in action. As the stream does not rise higher than the fountain, so the result is not likely to be better than the motive. But the rule does not always prove true when applied to the efforts and actions of men. Anglo-Saxons were brought to the Pacific coast by the love of gold and the greed to gain it. Yet they have done more in the short quarter of a century during which they have been in possession, to develop the resources and uncover the hidden riches of the country, than the Spaniards did in the three centuries during which they ruled over it. Moreover, the Spaniards went to California professedly for the highest and noblest purpose — to make Christians of savages, to extend the boundaries of that kingdom whose symbol is

the cross and the very genius of which is the amelioration of the condition of the suffering sons of men, the lifting up of the hearts and lives of those who accept it and live according to its requirements. Did they fail because they mistook the genius of the hierarchy which they sought to establish, and were themselves "blind leaders of the blind?"

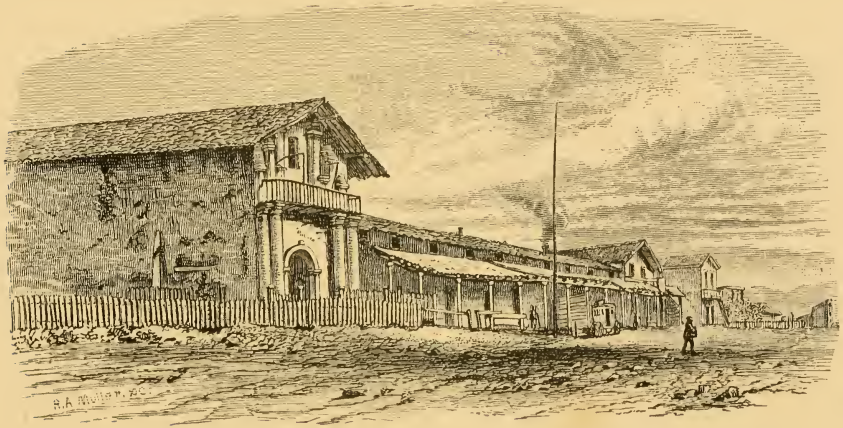
That these Spanish fathers had some of the "wisdom of the serpent" is evident, for they very wisely adapted their means to the accomplishment of their ends. These followers of St. Francis, who confessedly wished to build up a spiritual kingdom, thought it best to have a good earthly foundation for it to rest upon. So they took possession of the entire coast from the Golden Gate to San Diego, and as there was no way of access to the country except by sea, they controlled the whole. The possessions of one mission extended to those of another, so that no one could come to the coast to stay, or even to trade, without saying to the fathers, "By your leave."

Although the Spanish government was not unmindful of the desirableness of having this western coast of America attached to their dominions for worldly reasons, yet the governing motive seems to have been, the conversion of the natives to Christianity, or, perhaps it would be nearer to the truth to say, to Catholicism. Very soon after the discovery of the country efforts were made in this direction. Collections were made both in Spain and Mexico which, together with grants of land from the government, went to make up what was called "The Pious Fund of California." This fund was originally in the hands of the Jesuits. After that order had fallen

into disgrace and been expelled from Spain, the fund was passed over to the possession of the followers of St. Francis, or the Franciscans as they are generally called. There were no active measures adopted in furtherance of the great design of converting the Indians of California until 1768, when Father Juniper Serra, a devoted member of the order, was appointed president of all the missions to be established in Upper California. He lost no time in inaugurating his work. In 1769 the first mission was established in San Diego, near the southern boundary of what is now the State of California. This mission was but the entering wedge; mission after mission was planted along the coast, until they numbered twenty-two, and the whole distance from San Diego to the Golden Gate was subject to their control. The dominion of the missionaries was absolute. Both spiritual and temporal matters were under their control, and from their authority there was no appeal. They constituted both church and state, and were at the same time kings and priests. The absolutism of their sway continued for sixty years. They waxed rich and powerful in the prolific and beautiful country which they ruled. Each mission had its presidio or fort, in which there were, or were supposed to be, a company of soldiers for its protection. So absolutely was everything in the hands of the fathers that there was not an inn or a public table in the whole territory, even so late as when the country came into the possession of the United States. The wayfarer could stop at any of the missions or among the inhabitants of the few small towns, and his wants would be supplied. Food and lodging were given

freely, and a horse to ride to the next stopping-place. It is even said that a vase filled with silver coin was often placed in the room in which the stranger slept, from which he was expected to take what his needs required. Apocryphal as this statement seems, it is on record as a grave, historical fact. On the other hand, Dana says that, after accepting a meal or other hospitality, when the offer to pay was made, the steward uniformly answered, there was no charge, the food was the gift of the Lord. At the same time it was quite plainly intimated that the Lord would not be unwilling to receive a gift in return. The result was, that the recipient, being thrown upon his honor and his generosity, generally paid two or three times what the receipts were worth. Still, he could escape payment if he chose.

The fathers lived in all their missions in patriarchal state. The Indians were their retainers, or worse yet, their absolute and abject slaves. Some of the missions had three or four thousand natives attached to them, and each had all that dwelt in the vicinity. These shrewd old Spanish padres had rather remarkable ways of making converts to a religion the essence of which is, or ought to be, peace and love. Horsemen were sent out armed with the riata, with which cattle and horses were lassoed, and by its skillful use the savages were caught, and *compelled* to come into the church — compelled in a sense in which the Divine Teacher never meant that guests should be gathered to the feast. Eye-witnesses tell of men, women and children being marched into church for purposes of confession and worship, between guards bearing whips, by the touch of which the worshipers were persuaded to hasten to the



THE OLD MISSION CHURCH ("MISSION DOLORES"), SAN FRANCISCO.

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house of God,—which to them in this way was made, in truth, a refuge and a sanctuary.

These poor savages were thus reduced to a state of the most abject vassalage. If they believed and showed their faith by their work, they were fed and clothed; if they did not, they were beaten and starved. They were taught just so much learning and handicraft as would make them useful to their masters; but they were taught nothing on account of their own needs. The proofs of the skill they acquired remain, and are seen in aqueducts and well-built churches, in olive orchards and vineyards, in reservoirs and alamedas. All this work was done by the natives. The fathers furnished the brain, the Indians the muscle. The fathers showed themselves wise in the wisdom of the skillful general, who keeps himself out of the way of the bullets, but lets his soldiers have their fill of fighting and danger, and when the battle is over takes all the glory.

There seemed to be a natural incompatibility between the Spaniard and work,—an incompatibility that was invincible. The direst poverty, the most urgent need, could not make him willing to labor: that must be done by those less favored.

When all the disadvantages of the circumstances are considered, it seems quite wonderful that so much was done by the Indians under the supervision of the fathers, and that what was done should have been done so well. There were no saw-mills, where timber could be prepared for building the houses, and no roads by which it could be brought to the spot where it was wanted. In some cases the timber was cut and hewn on the sides of the mountains, in inaccessible places, and the poor Indians

were obliged to carry it long distances on their shoulders. The little machinery they had was of the rudest character, and yet with all these disabilities the churches they built continue until the present time to challenge the admiration of beholders.

These churches are all built very much after the same pattern. They are of adobe, or unburned brick, with tile roofs, and are from one hundred to one hundred and fifty feet in length. The width is generally about one-third of the length. They are ornamented within with rude pictures and carved images, clothed in tawdry finery, with a mixing-in of gilt and spangles, and are well calculated in their subjects and treatment to work upon the imaginations of the untutored and ignorant. The choirs of the churches were made up of Indians trained for the purpose. They were taught not only to sing, but to play upon instruments. They were never paid for their labor, and were taught that, as the fathers held in their hands the temporal interests of the Indians, so they did also those which were spiritual and eternal. If they were disobedient, there awaited them not only stripes and imprisonment in this world, but torment and burning flames in the world to come.

Thus the fathers were supplied with faithful laborers at a very small cost. True, they were obliged to feed and clothe their vassals. But in that genial climate there was need of but little clothing, and that little, for the Indians, was of the poorest quality. The men wore a coarse cloth girt about the loins, and the women had but a single garment, a sort of gown, also made of coarse cloth. Their food was inexpensive. The only trade in the country was

in hides and tallow, and beeves were often slaughtered for the sake of these products. It therefore saved the flesh from waste if it were given to the Indians. The meat of the slaughtered cattle constituted their principal food.

At one time the twenty-two missions established between the years 1769 and 1822 had dependent upon them and subject to their control more than sixteen thousand Indians.

The palmy days of the missions were between 1800 and 1820. Their possessions in flocks and herds and horses reached an extent that seems almost incredible. The mission of San Miguel, in 1821, had ninety-one thousand head of cattle, four thousand horses, two thousand mules, one hundred and seventy yoke of oxen, and forty-seven thousand sheep. The other missions numbered nearly or quite as many.

The only exports from the country were hides and tallow. The former were called "California bank-notes." The trade was principally with Boston, though occasionally vessels came from Spain, from Australia and from the Sandwich Islands. Dry goods and groceries were brought in the vessels and exchanged for hides and tallow. Even so late as 1835–6, when Dana went to the Pacific coast "before the mast," there was no other trade the whole length of the seaboard, and yet the Spaniards had been in possession of this wonderfully productive country for nearly three centuries.

To one who is familiar with the present state of affairs — who knows the great amount of business done at different points along the coast, and has seen the flags of almost every nation under the heaven flying from the mast-heads of vessels lying at anchor in the bay of San Francisco, it

is interesting as well as strange to hear that in January, 1836 — that is, only forty years ago — there was but a single vessel in the bay, and that was waiting for hides to be brought from San José, whither a part of the crew had gone for them.

Dana gives a curious account of the manner in which these cargoes were taken on board the ships. When the hide was taken from the animal it was fastened down to the ground at each of the four corners, to keep it from shrinking while drying. When loaded on board the vessel each hide was doubled lengthwise and carried on the head of a sailor to the boat that was to receive it. Sometimes this work involved wading out into the water a considerable distance. Not unfrequently a sudden gust of wind would disturb the equilibrium of this nicely balanced head-rigging, and off it would go quite away from the line marked out, taking the poor bearer along with it, if he had pluck enough to hold on, to the unadulterated enjoyment of the bystanders, but great inconvenience of the poor fellow who was most interested in the catastrophe. The sailors were obliged to have caps cushioned with padded wool, to protect their heads from the friction of the hides, and save themselves from becoming "bald-heads" before their time.

Vessels were sent out from Boston with all sorts of notions to be exchanged for hides and tallow, and large fortunes for those days were made by one or two Boston merchants in this trade.

Dana represents the Spaniards and their Mexican descendants as *shiftless* almost beyond description. There was no working class among them. "They seemed to be

a people upon whom a curse had fallen and stripped them of everything but their pride, their manners and their voices." It was a pleasure to listen to their sweet, soft tones, even though not a word could be understood. The women especially were blessed with that pleasant gift, a voice low and musical. It was no strange thing to see a Spaniard with the manners of a lord, dressed in fine broadcloth and velvet, with a noble horse completely covered with trappings, upon which he sat with the air of a king, when he had not *in esse* and scarcely *in posse* a cent with which to bless himself.

Strange to tell, a love of dress also prevailed among the women! Nor was there always shown a nice regard for the proprieties of time and circumstance. A woman who lived in two rooms on literally a ground floor might be seen issuing from her door arrayed in a silk gown, satin shoes covered with spangles, a high comb, and gilt, if not gold, ear-rings and necklace. Life was to the Spaniards a long holiday without cares or duties. The few trading-posts along the coast were in the hands of "Yankees," who "had left their consciences at Cape Horn," married California wives, abjured the Protestant religion, adopted the Catholic, and brought up their children both as Catholics and Spaniards. Their abandonment of Protestantism was compulsory if they wished to remain in the country. Protestants had no rights. They could not own real estate or transact business. There was no manufacturing done, and no work of any kind performed that could be left undone. Abounding in grapes as the country did, they bought poor wine at a high price, which was brought from Boston. They paid three or four dollars

a pair for shoes and ten or twelve for boots made out of hides they had sold, and which had been twice around the Horn. It is only by understanding to some extent the character of this people that we are able to comprehend how they could for so long have occupied a country of capacities so nearly unlimited without developing some of them, and showing how extensive they were.

Their houses were built of adobe, and generally had tile roofs. They were all constructed after one model, having but one story and one tier of rooms, without fire-place or chimney, the work being generally done in a small out-house built for the purpose; the windows were grated and without glass, save in the houses of the more wealthy. Except in these same cases the floors were the unadulterated earth. But these Spaniards had one virtue which they taught the Indians. They had great regard for cleanliness. To this day this attribute or habit is retained, and go where you will among the "greasers" you will find their houses tidy and their earthen floors swept as clean as a broom can make them, while the yards share in the same blessing.

All the work in the families, as well as in the missions, was done by the Indians. As they were not paid for their labor, and it cost so little to keep them, there was no Spaniard so poor that he could not, at least, have one or two menials to do him service.

At the time of Dana's visit, hides sold at about two dollars each, and not unfrequently articles were given in exchange worth less than half the estimated value of the skins. In enumerating the hardships of his condition, having to remain eighteen months on the coast of California,

sailing up and down in order to get hides enough to load a single vessel, Dana says: "Besides the length of the voyage and the hard and exposed life, we were at the ends of the earth, on a coast almost solitary, in a country where there is neither law nor gospel, and where sailors are at their captain's mercy, there being no American consul or any one to whom complaint could be made."

What a change since then! and that was only forty years ago! One can now make the journey in half a score of days that then seemed so nearly endless, and can find comfort and safety everywhere. Yet the writer of that lament has not had time to fall into the "sear and yellow leaf" that preludes the passing away. He may yet be in the vigor of a mature manhood. Has Aladdin been here with his wonderful lamp, or has our American civilization made the ancient fables of genii and giants seem actualities of common occurrence?

But the day of doom was nearing the followers of St. Francis. The power of their patron saint proved insufficient for their protection when the time of need came. In 1822 the people of Mexico threw off the Spanish yoke and put on one of their own making. The government being moved nearer to the missions had a better opportunity to become informed in regard to their wealth and the extent of their possessions. Self-abnegation was not a characteristic of the Mexican authority. Every party that came into power, and their name was legion, filched something from the fathers, who, in their turn, became reckless in regard to the future, and careful only to secure what good they could in the present while the means were within their reach.

Little by little their power and possessions were infringed upon until finally, in 1840, there was a grand swoop made by the Mexican government, which took possession of the missions and all that pertained to them. The fathers were then helpless and penniless. In 1845 the Mexican Congress sold the missions to the highest bidders.

As is often true, the fathers suffered from their own craftiness, and were taken in the net which they had themselves spread. As they had zealously kept out all foreigners from the country, and as the Indians, like our southern slaves, were chattels, not persons, and therefore not entitled to representation, the inhabitants were not sufficiently numerous to be properly represented in the Mexican congress. So the politicians had it all their own way, and did not consult the interests of those who had no influence in the government.

The effects of the mission system upon the Indians were evil, and that continually. What was good in them as savages was crushed out by the abject slavery to which they were reduced, while they took on in very scant measure what was really good in their Christian masters. The California Indians are now classed among the lowest and most degraded specimens of the human race. But they do not always seem to have been of this type. Cabrillo, who discovered the country, spent six months in what is now Santa Barbara county, and has left on record the names of forty towns and villages, or *pueblos*, that he found in that region alone. Dwelling together in towns always indicates some knowledge in a people of trade, and regard for mutual rights. The Indians on the coast made

canoes of the tule, in which they went quite a distance out to sea; and they kept up a vigorous trade in fish, abelone and other shells with those who lived in the interior.

Father Juniper Serra, who founded the first mission in 1769, speaks of their number as being immense. He says: "All those of this coast live very contentedly upon various seeds, and fish which they catch from their canoes made of tule, in which they go out considerable distances to sea. They are very affable. All the males, both large and small, go naked; but the females are modestly clad, even to the little girls." That they had a glimmering idea of a future state is proved by their burning the ornaments and weapons of the dead with their bodies, that they might have the articles to use in the shadowy land to which they had gone. They expressed their idea of immortality by saying, that "as the moon died and came to life again, so would men come to life after they were dead." They believed that the hearts of good chiefs went up to heaven, and were converted into stars, so that they could continue to watch over their people. There is abundant evidence that they were not wanting in courage,— in the sturdiness with which they stood up for their rights, and the bravery with which they resisted the encroachments of the white man. The country seems to have been thickly populated. Kit Carson says that even so late as 1829 the valleys were full of Indians; they were plentiful everywhere. They were numbered for the first time in 1823, when there were one hundred thousand eight hundred and twenty-six. In 1863 there were only twenty-nine thousand three hundred. There are probably not more than twenty

thousand now. "They are gone; they have all passed by," leaving scarcely more than their names as mementoes. Good taste has been shown in retaining many of their pleasant titles. Colusa, Shasta, Yolo, Tehama, Napa, are specimens of these bequests received either from tribes or noted chiefs.

A mysterious law, which has within itself the power of its own execution, seems to have decreed that civilization and barbarism shall not dwell together. When civilization comes, the savage must accept it or die! The latter penalty seems to have been dealt out to the Indians with great suddenness in California. In the valleys that were so recently teeming with natives there is scarcely one now to be found. They have vanished as the mist before the clear shining of the sun. Some of them have been gathered into reservations under the pretense of taking care of them. But it is too often such care as the wolf takes of the lamb that is in his power. They are made to toil and raise crops, which are sold to put money into the pockets of those who superintend the reservation, and the poor Indian is allowed to live as he can. Even if one is not particularly sentimental in regard to the Indian, such wrong and oppression, and wholesale destruction, can scarcely be regarded without pain. Their sixty years of bondage to the fathers took from them their independence, and crushed out whatever manliness there was in their nature. Trained to depend entirely upon others, when left to themselves they were like ships without rudders, they drifted whithersoever the winds and the waves carried them, and these have borne them to sure and swift destruction.

CHAPTER IV.

GEOGRAPHY AND TOPOGRAPHY.

THERE are three ranges of mountains within the boundaries of the United States, all running in nearly the same direction, though not exactly parallel. The Appalachian range lies on the eastern border. This chain is made up "of a series of compact wrinkles of the earth's crust," having within its limits no very high peaks, the loftiest being not more than seven thousand feet. None of the different lines of the Appalachian chain are immediately on the sea-coast. In New England the nearest is fifty miles back, and the interval gains in width going southward, until in the Carolinas it has a breadth of two hundred miles. The congeries of ranges belonging to the Appalachian chain averages one hundred miles in width. Extending west from this chain are the broken foot-hills which form the eastern portion of Ohio and parts of Kentucky and Tennessee. Pittsburgh is in this foot-hill country, and is six hundred and ninety-nine feet above the sea-level. From this point to the mouth of the Ohio river the descent is three hundred and seventy-five feet, the level there being only two hundred and seventy-five feet above the Gulf of Mexico. The Ohio river forms the eastern boundary of the prairie region, the garden of the continent, of which nearly the whole State of Illinois can be taken as a type.

Crossing the Mississippi, and still pursuing a westward

course, when the western border of Missouri is reached there is a choice of two ways of continuing the journey, either of which will advance the traveler on his way toward the setting sun. He can follow up the Kansas or the Platte rivers, both of them confluents of the Missouri. He may travel up either of these rivers more than five hundred miles, all the while ascending, but ascending so gradually as to be scarcely cognizant of the fact. On either side there is a vast plain, which abounds in nutritious grasses, though destitute of forests except along the river courses. These are "the plains" about which so much was said in the early days of immigration to the Pacific coast. These plains form the western side of the great central valley of the continent; and whatever barrenness they have is due to the insufficient rain-fall, which is greatly less than it is in the immediate vicinity of the Mississippi river. Only about one-third as much rain falls on the western as on the eastern side of the valley. This great American desert of twenty-five years ago has lost its reputation for barrenness. Coal and iron are found there, and when its need of water can be satisfied it can be made "to bud and blossom as the rose." Grain and vegetables and fruits grow in abundance when the soil is properly irrigated.

Omaha, situated on the west bank of the Missouri river, is one thousand feet above sea-level, and from there the ascent, going westward, is continuous, though gradual. In passing over the Union Pacific railroad, the first view of the Platte river is gained just before reaching Fremont, fifty miles west of Omaha. This river is a disappointment to most persons who see it here for the first time.

It seems to be not so great or so grand as had been supposed. It is said that in the days when emigrants crossed the plains in wagons on their way to California, they were sometimes obliged to dig pits in the river and let the water settle into them in order to get enough for their teams to drink. The average width of the stream is three-fourths of a mile, and the average depth six inches, which shows that it is very much spread out. The valley is level and grand in its extensiveness.

The Union Pacific railroad follows the valley of the main Platte river for three hundred miles, when it reaches the North Platte, which it crosses on a long and substantial trestle bridge. The Black Hills are here seen in the distance, but the traveler on the Union Pacific road looks in vain for anything that will come up to his preconceived ideas of the Rocky Mountains. Indeed, if he follows the line of the railroad he will fail altogether of getting any just appreciation of the majesty and grandeur of this mighty range of mountains. He must leave the line of the Union Pacific at Cheyenne and go one hundred miles south to Denver, on the South Platte. From Denver he must go westward, and, if possible, southward too, and make the familiar acquaintance of the peaks of the "snowy range," get into the near neighborhood of Pike's Peak, and of Grey's Peak, and of Long's, the three principal vertebræ of the back-bone of the continent, in order to know anything about the peculiarities of the range or the appropriateness of the name by which it is called. The Rocky Mountains form the grand divide which separates the waters that flow into the Atlantic from those that flow into the Pacific ocean. It is an interesting fact

that there is a point not far from Fremont's Peak called the Three Tetons, from which can be seen, at the same time, the beginnings of the Lewis or south fork of the Columbia river, the Yellowstone, a confluent of the Missouri, and the Green river, a branch of the Colorado. Like children, that are sheltered under one roof in infancy, then find their devious ways into the great world, and take upon themselves each his own duties, and lie down at last in far distant graves, so these rivers, starting from one birthplace, run their courses in different directions and find different fates in the end. The Lewis fork, after turning southward, and then westward, and again northward, unites with the north fork of the Columbia, and the two together joining their forces for the purpose, break their way through the Cascade mountains that vainly place themselves in the path to impede their progress. In the accomplishment of this great undertaking, these united rivers, now forming a unit, originate some of the grandest scenery in the world, and then go on peacefully for one hundred and fifty miles to find the ocean they have been so long seeking. The Yellowstone, taking an opposite direction, after furnishing fields of delight for the naturalist and a national park for the country, makes its way to the Missouri river, and through that into the Gulf of Mexico and the Atlantic ocean. Finally, the Green river goes southward and westward till it reaches the Colorado river, and having entered into partnership with this stream the two go together to the Gulf of California, and through that flow into the Pacific ocean.

The plateau between the Rocky and the Sierra Nevada mountains has an average width of one thousand miles,

and Prof. Whitney says that it nowhere descends to less than four thousand feet above sea-level. In this plateau lies the Great Basin, in which all the streams within its confines are lost because they can find no way out. The Humboldt river is on the western side of the basin, and is among the rivers that are obliged to sink because they can no longer swim. The Wasatch and Humboldt mountains are isolated ranges within the jurisdiction of the Great Basin, or forming its eastern rim, and separating it from the Colorado and the land which the river drains. The Sierra Nevada mountains form the western border of the basin.

As California is the objective point in the present writing, the Sierra Nevada and the Coast Range mountains are those which most concern us and with which we shall have mainly to do. These two ranges of mountains give to California its most marked peculiarities, and have hitherto been the sources of its chief wealth. The great gold region is on the western slope of the Sierra Nevada mountains and the adjacent foot-hills. Everywhere in the Sacramento and San Joaquin valleys these two mountain ranges are seen, forming the visible and distinct lines of boundary; the Sierra Nevada range, with here and there a white-capped peak, on the east, the less pretentious Coast Range on the west.

The Sierra Nevadas are made up of a series of ranges, which average about seventy miles in width. The Coast Range consists of chains, which aggregate about forty miles in width. There is a great and essential difference in the structure and conformation of the two ranges. The Sierra Nevadas can be traced in consecutive order

for a great distance. There are two lines of culminating peaks that can be followed through the whole five hundred miles over which they extend within the boundary of California. In the Coast Range the continuity is continually broken. Everywhere there are confusion and disorder. Each mountain seems to be the product of a local cause and independent of its fellows. The minerals are different in the several eminences, which are in close neighborhood. There are peaks that elevate their heads from fifteen hundred to eight thousand feet above the sea-level, but there is no connection between them, and their direction cannot be reduced to any mathematical line. In the Sierra Nevada range there is, on the contrary, great regularity in the elevations and depressions. Prof. Whitney draws a line which he calls "the main axial line of the State," which cuts through very near all the highest peaks in the State from Mount Shasta on the north to Mount Whitney on the south. This line thus extended runs straight for five hundred miles. East of these culminating peaks there is a series of lakes, the principal of which are Klamath, Pyramid, Mono and Owen's. The highest peaks in North America are found in the southern part of the Sierra Nevadas.

The range is rich in mineral wealth beyond any other locality known in the world. It has gold hidden away in its secret places, which men are only beginning to find ways of discovering and bringing to its proper use. The greater part of the ore that has been obtained as yet has been found in the western declivity of the mountains. In less than a quarter of a century the yield of the precious metal from these fields has been nine hundred and fifty

million dollars, and they now afford thirty-seven per cent. of the whole amount of production, and ten per cent. more than Australia. Nor is gold all the wealth which these mountains contain. In the range and its offshoots, silver, copper, iron and coal are hidden away, waiting for the ingenuity and industry of man to bring them forth and convert them to use.

While these opulent mines lie beneath the surface, there are upon it the finest coniferous trees that can be found on the continent, or in the world. The habitat of the big tree is here, and well up toward heaven. No air less pure than that which rests away up a mile or so above the fogs and miasms of the world would suffice to give trees a circumference of over one hundred feet, and a height of three hundred and more. Although this tree has been found in so many localities, it is observed that all have an elevation of from four to six thousand feet above sea-level. Between the high mountains of this region there are valleys interspersed, among which are lovely nooks, where almost all kinds of fruit ripen, and the grape delights to grow, and the climate is well adapted to comfort, and conducive to health. The Sierra Nevada range is not only unsurpassed in extent and altitude by any other range in North America, but it is unequaled in its wonderful scenery, as well as in mineral and vegetable wealth. The Yosemite valley stands alone, peerless among ten thousand; yet, every year new discoveries are made of the wonders that are shut up in the high Sierras.

The wealth that has been brought out of these mountains has revolutionized the commerce of the world, and affected its civilization everywhere. In effecting this

change, wonderful energy and skill have been developed in the explorers and workers. Yet what has been is only a foretaste of that which will be. What prophet dare predict the further mighty impulses that may be given to the population of the globe by the influences that will go out from this young member of our family of States?

The Sierra Nevada mountains — as the name is popularly used — are limited to California, and extend from the Tejon pass on the south to Mount Shasta on the north, a distance of about five hundred and fifty miles. The highest peaks are in the southern part of the range. As is true of almost all high mountains, the central core is granite. In the most elevated portion of the Sierra this granite core is forty miles wide.

In both the Sierra Nevada and the Coast Range the mountain walls are often broken, and lovely valleys are thrown in between the fractured parts. There are valleys lying in the Sierra Nevadas from three to seven thousand feet above sea-level, with climates so exhilarating and delightful as to leave little to be desired. The valleys in the Coast Range are not so elevated, but they are larger and more lovely. The Coast Range has a way of furnishing the conditions for vegetable growth to the very tops of the mountains. Peaks three thousand feet high are covered with a luxuriant growth of wild oats to the very summit. In the Coast Range, and among its foot-hills, the red-wood, that other member of the *sequoia* family, has its home, and is found nowhere else. This tree, while less celebrated than its *confrère* the big tree, is more useful, and when seen in the large groves in which it stands, is scarcely less imposing.

The loftiest peaks in the Coast Range are low compared with the giants of the Sierra Nevada. Mount Hamilton, fifteen miles from San José, is the highest point seen from San Francisco. It is only four thousand four hundred feet high, ten thousand feet below the summit of Mount Shasta. It is so surrounded by other peaks not much less elevated that it is not easily distinguishable, while Monte Diablo, which is not so high by nearly one thousand feet, is much more conspicuous, because of its isolated position near the break made in the range through which the bay empties its waters through the Golden Gate into the ocean.

Going north or south from the central portion, the peaks become more elevated, as if preparing to meet the range of the Sierra Nevada on terms more nearly approaching equality. In these extremities of the range there are peaks that reach an altitude of eight thousand feet.

The scenery of the Coast Range is less grand than that of the Sierra Nevada. The "line of beauty" prevails very generally, and gives rounded outlines to the mountains and gentle swells to the foot-hills. The valleys are more influential in giving character to the scenery than the elevations. Nowhere else can valleys be seen that are so park-like. The tree that is oftenest met with is the oak; and no one knows how beautiful an oak may be until the specimens that prevail here are seen. Their limbs droop with the graceful sweep of the New England elm, and attain such magnitude that the trees seem to be crowned with majesty and power. It would be a very cold heart or a very critical eye to which they would not appeal successfully for admiration. There are some single oaks in the Napa valley, in the vicinity of Calistoga, that would

well pay one for going far to see. This grand and beautiful tree is the burr-oak *(Quercus macrocarpa)*. The trees do not cover the ground thickly, but are scattered here and there, as though they thought too much of themselves to crowd together in herds like their common brethren. They present the appearance of having been planted by a skillful artist, who wished to produce the best scenic effect and placed them just far enough apart to make them imposing. Occasionally a live-oak is seen among them, which, being much less grand and beautiful, looks as though it might be glad to dwell in such grand company.

These Coast Range mountains occasion some confusion in the minds of strangers on account of the great variety of names by which they are called, as well as by their want of connection with one another. The Spaniards must have nearly exhausted the titles of their saints in getting denominations to apply to the different ranges. They were a very godly people, these Spaniards, judging by their familiarity with and regard for the inhabitants of the spirit-world. No name was given to anything that had not a San or a Santa prefixed. Either a masculine or a feminine saint must stand sponsor when anything was to be christened.

Of the different ranges of mountains that belong to the general family of the Coast Range, the longest, best defined and best known is the Monte Diablo range, which extends from Monte Diablo, thirty miles north of San Francisco, to Los Gatos. It covers a territory about one hundred and fifty miles long and from twenty to thirty miles wide. This range contains the only coal mines that have as yet been profitably worked in the State. It forms the western

MIRROR LAKE, WATKINS' AND CLOUD'S REST. Pages 224 and 225.

boundary of the great San Joaquin valley. All the mines of cinnabar or quicksilver that have as yet proved sufficiently rich to pay for working are in the Coast Range or the foot-hills adjacent.

The Coast Range inosculates with the Sierra Nevada both at its northern and southern extremity. There are spurs that cross from the one to the other range, and to which they belong can only be decided upon examination of their age. The Sierra Nevada range is entitled to the honor of seniority according to the tests of geology. Near Fort Tejon, in latitude 35°, the ranges close in on all sides, and it becomes impossible any longer to draw a line of distinction between the two great chains. So also on the north, Mount Shasta seems to be the point where they consolidate, though after a while they both spring up out of the ground again, and under new names traverse Oregon and Washington; the Coast Range taking the more ambitious name of Olympian mountains, and the Sierra Nevada exchanging its Spanish cognomen for the plain English name Cascade.

CHAPTER V.

DIMENSIONS AND DIVISIONS.

CALIFORNIA extends through more than ten degrees of latitude, from 32° 40′ to 42°. The length of the State is seven hundred miles, and the average width, fifty. It has a coast range equal in length to that included between Plymouth, Mass., and Charleston, S. C. The State contains one hundred and sixty thousand square miles, an area greater than that of New York, Pennsylvania and all the New England States put together, and equal to England and Ireland with a few of the smaller German principalities thrown in. In variety of climate, soil and productions it is scarcely equaled by any country or countries of similar extent, so that it has within itself the elements out of which an empire might be made.

Southern California is usually considered as extending from 36° to the southern boundary of the State. It includes seven counties: San Diego, San Bernardino, Los Angeles, Ventura, Santa Barbara, San Luis Obispo and Kern.

These counties embrace nearly one-third of the territory of the State, and contain fifty thousand square miles, or more than thirty millions of acres of land, three-fourths of which is adapted either to agricultural or grazing purposes. This is the very garden of the State. Here is the home of the orange and the fig and the olive and the pomegranate, the lemon and the almond, while there is

good reason to believe that the tea-plant, the banana and the India-rubber tree will take so kindly to the soil that their culture will be profitable. The one great want common to nearly all this region is water. Supply that to the land in sufficient quantities, and there will scarcely be a limit to the kind or extent of its productions.

San Diego, the southernmost of these counties, is in itself so extensive as to be sufficient for a principality. Although the Colorado desert covers one-third of its surface, and mountains and cañons four millions of acres more, there are still left two millions of acres suitable for farming or grazing.

The Colorado desert is a desert only for the want of water. Treeless and arid as it is, the soil is rich, and with a sufficient supply of moisture would be fertile and fruitful. The delta between the Gila and the Colorado, which is the very heart of the desert, seems once to have been the bed of the rivers that now inclose it, they having made for themselves new channels. The curious fact that this delta is lower than the Gulf of California, into which the rivers flow, will make it easy of irrigation. Hence it is very probable that the time will come when this desert will have the same history that some of the deserts of other days already have — it will be among the things that have been and are not.

Fort Yuma, a government post in the southeastern corner of this county, is at the same time the hottest and the dryest place in the State. The mercury reaches 122° in the shade in summer, and the average rain-fall is three inches per annum.

There are some strange phenomena in this part of the

county — indeed, there is much evidence to show that the greater part of southeastern California is in an unfinished state — that nature has not so far concluded the job of "fixing up" as to be ready to turn it over to man for use and occupation. Not a few of these strange things it would well repay the curious to go and see. A few miles southwest of Don Palmas there is a broad valley, bounded by ranges of hills of hard-baked red clay, called the Chocolate mountains. In this valley there is the dry bed of a lake forty miles in circumference, and nearly eighty feet below the level of the sea. This great basin is separated by a level plain, about five miles wide, from the dry beds of a number of creeks, which appear to have been once connected with it. Nearly in the center of this plain there is a lake of boiling mud, about half a mile in length by five hundred yards in width. In this curious caldron the thick, grayish, pasty earth is continually in motion, hissing and bubbling, with jets of boiling water and clouds of sulphurous vapor bursting through the tenacious crust, and rising high in the air with reports often heard at a considerable distance. The whole region around this lake appears to be underlaid with this liquid soil, for the ground trembles under foot, and subterranean noises are heard in all directions. Hot springs and sulphur deposits are numerous for many miles around.

In 1867 a large spring of pure, cool water began to flow from a fissure in a high bluff a few hundred yards from the station at Don Palmas, where there had been no water before. This strange event was heralded by no earthquake or unusual disturbance, and it was all the more strange from the fact that none of the wells previously

sunk in different parts of the desert afforded sweet water. In all cases the liquid was so impregnated with different kinds of salts and alkali as to be unfit for use.

San Diego county entered the ranks of the bullion-producing counties in 1870. Gold was found in the Isabella mountains, forty-two miles northeast of the town of San Diego. There was quite an excitement about these mines for a time, the ore being pronounced of unusual richness. A hamlet sprang up at once, as is usual in mining districts, to which the name of Julian City was given. Subsequent tests did not justify the first expectations in regard to the richness of the ore, and many incipient plans failed of execution for want of the necessary capital. San Diego, the county seat and principal town in the county, is the oldest settlement in the State. The first of that series of missions which was established along the coast by the followers of St. Francis was established here in 1769. The new settlement was placed under the tutelary guardianship of their patron saint, San Diego, the Spanish for St. James, and his name given to the mission and to the bay near which it was situated. Afterward the title suffered another repetition and was given to the county.

The San Diego mission was one of the richest on the coast. As the years passed the fathers waxed both mighty and rich. Their flocks and herds were numbered by the tens of thousands, as were also their horses and mules. Their harbor, being the best then known on the southern coast, attracted commerce, and made the town the center of whatever trade existed. This was, however, very limited, the exports being confined to tallow and hides. For

some years there was no other harbor known on the coast. The bay of San Francisco was not discovered for several years after the mission was established at San Diego, and some time was allowed to elapse, even after its discovery, before its value as a harbor was recognized.

San Diego was the general depot for all the business on the seaboard. The custom was for vessels to sail along the coast and gather up the hides which the other missions had to sell, and bring them all to San Diego, where they were stored until enough were obtained to load a vessel. Sometimes months were employed in getting together enough for a cargo. When Dana was on the coast in 1836–7 it took a year and a half to collect a load for the vessel upon which he returned to Boston.

The mission was surrounded by extensive gardens and vineyards, which were cultivated by the Indians under the direction of the fathers. The church buildings were large and fine, at least for the period in which they were erected. They are now crumbling away under the influence of "time's effacing fingers." In 1866 the bells that for three-fourths of a century had called the Indians to prayer and to labor, were taken from the belfry. Of the gardens scarcely anything remains except the olive orchard.

The old town of San Diego is near the harbor of the same name. Two miles distant is the new town, where the government stores are kept. Some substantial residences and a wharf have been built here within a few years. Notwithstanding the fine climate of San Diego, its growth has been slow, mainly because of the depressed condition of the agricultural interests in the region round about. The want of water is the blight that rests upon

this otherwise surpassingly fine country. With the second best harbor on the Pacific coast, and such a climate as can scarcely be found elsewhere in the world, the place has not kept up, in the race of progress, with other towns which are in many ways less favored. Where no water exists, or but very little, agriculture cannot flourish; and without this for a basis, no place can really prosper. It has been said of the San Diegoans that they live upon a hope and a reality, and all their great expectations for the future are based upon these two. They hope for a railroad, and they have a harbor. The Texas Pacific railroad is to make this place the point of approach to the Pacific coast. But, though the railroad may do much, it is not probable that it will bring general prosperity. There must be some plan devised for irrigating the soil, and thereby advancing agricultural interests, before the town will enjoy a healthful growth and assured well being.

Twelve miles south of San Diego is placed the stone monument erected by government to show where the territory of the United States ends and that of Mexico begins. San Diego is five hundred miles from San Francisco and one hundred and twenty-five from Los Angeles. At present there is but little to attract persons to the place except its rarely fine climate. In this respect, it is thought by those who have tried other places in California, together with the principal health-resorts in Europe, to be nearly or quite without a rival. To those who require an equable, dry and sunny climate it cannot fail to be attractive and beneficial. The average rain-fall is but ten inches per annum, and there is never enough at one time to cause

it to be muddy. There is a good hotel for the accommodation of visitors, in which the charges are moderate.

San Bernardino county is the largest in the State; yet three-fourths of the ten millions of acres which it contains consist of dry and desert-like valleys, volcanic ranges and inaccessible mountains. In the Armagoza valley there is fertile land and also good water. The Armagoza river flows northward, and sinks in the northern part of the county. This sink and the region around it form the great Death Valley, than which a more fearful, uncanny place can scarcely be imagined. It is four hundred feet below the level of the sea, a depression greater than that of the Caspian Sea, and nearly equal to that of the Dead Sea. Only seventy miles west of this depression rise some of the highest peaks of the Sierra Nevada mountains. Death Valley was probably, at some time in the past, the bed of a lake, the waters of which were heavily charged with salt and soda. A large portion of the basin is incrusted with these minerals, which in some places are several inches deep. The remainder of the surface of the valley is composed of an ash-like earth mixed with a tenacious clay, sand and alkali, and is so soft that a man cannot travel over it without difficulty, and beasts of burden cannot cross it at all.

In spots where there is least moisture, the surface is so porous that a horse sinks half-way to his knees at every step. Water can be obtained almost anywhere by digging down a few feet, but it is so saline and bitter that it can be used neither by man nor beast. There are no traces of vegetation except a few clumps of useless shrubs on the border of the valley, and no sign of animal life

except a black gnat, of which there are myriads, which enter the eyes, ears and noses of travelers, and are annoying beyond description.

The valley derives its lugubrious name from the melancholy fate of a party of emigrants who, in 1849, perished within its limits. The bones, bleached by the sun, and the cooking utensils and other accouterments of the unfortunate party are still met with in the valley. The company wandered about, no one knows how long, in search of water, and died because they found none.

This dreadful valley is one hundred miles long and twenty wide. Along its center there is a strip of salt marsh, forty-five miles long and fifteen broad. Over this whole extent a thin layer of soil covers an unknown depth of soft, gray mud. This is the sink of the Armagoza river. There is a wide circuit of country round about this valley in which no pure water can be found. Springs are not infrequent, but the water is so bitter and acrid as to be entirely useless.

The heat of this valley is fearful during the summer, and even in winter it is very great. An exploring party who visited it in January, 1869, found the temperature 90° Fahrenheit. When there is no breeze, the air becomes so dense and overcharged that respiration is painful and difficult. South of this fearful place is the sink of the Mohave. The Mohave river rises in Bear valley, and, running sometimes over and sometimes under the surface for one hundred miles, finally disappears in the earth, forming what is known as Soda lake. This is rather a peculiar sort of lake, since there is never any water in it! It is twenty miles long and five miles wide. Even in the

rainy season all the water that is brought by the Mohave river is absorbed by the alkaline soil as soon as it reaches the spot. The whole surface of the lake is so covered with the carbonate of soda that it looks like an immense bed of snow.

The southwestern part of the county is more attractive. The best agricultural district in the county is located here, and here is the beautiful valley of the San Bernardino river. This valley is fifty miles in length and twenty in breadth, with mountains on the north, south and east, which are well timbered, and make a beautiful setting for the rich lands which they inclose.

The present town of San Bernardino was laid out by the Mormons in 1847, and according to the same general plan that was afterward adopted in laying out Salt Lake city. The streets cross each other at right angles, and inclose lots which contain from one to five acres, so that the houses are all surrounded by abundant space for gardens. In 1856 nearly all the Mormons abandoned the place and went to Salt Lake.

The San Bernardino valley contains thirty-six thousand acres, and has the advantage over most parts of southern California in being well watered. There is not only running water which never fails, but artesian wells have been successfully bored. Flowing water, and that which is good, is found by boring from one hundred and fifty to three hundred feet. One of these wells will irrigate a considerable tract of land. Very good crops of grain are raised without irrigation, by taking advantage of the conditions of the season. If wheat and barley are put in the ground in time to have the benefit of a considerable part of the

winter rain, a harvest of from forty to sixty bushels to the acre can be gathered in time to put in Indian corn, so as to obtain a yield of from sixty to seventy bushels per acre, as a second crop.

Alfalfa, the Chilian clover, is cut seven times in the year, and yields, in all, from ten to fifteen tons to the acre. The semi-tropical fruits do as well in San Bernardino as at Los Angeles, while land is cheaper and better terms are offered to settlers. The climate is especially delightful. Being seventy-five miles from the ocean, the climate is more salubrious and grateful to many invalids than that of places on or near the coast.

The Riverside colony is established near San Bernardino. The company own eight thousand acres of land. They have brought sufficient water down in a flume to irrigate not only their entire tract of land, but much more besides. This colony offers many inducements to settlers, among which are an abundant supply of water, a post-office, and a school-house.

Los Angeles county has attracted more attention than any other part of southern California. The county seat and principal town has the same name as the county. The full Spanish name was Pueblo de Los Angeles (the city of the angels). The name must have been given prospectively, to be ready for a time that has not yet come, unless we can suppose that the angels care more for beautiful natural environments than for moral character; for, distinguished as the place is for the former, in the latter it is considered below par, according to the not too high standard of California.

Los Angeles is one of the oldest towns in the State,

and had laid aside its swaddling-clothes before San Francisco had any being. It is situated in a narrow valley, which is bounded on the west by low hills that extend from the Santa Monica mountains, about forty miles distant, and on the east by the rising land of the San Gabriel plain, through which the Los Angeles river flows. The old or Mexican part of the town extends up the valley nearly a mile. Here are still seen the original adobe houses, with their flat roofs covered with asphaltum, and surrounded by broad verandahs, in the common Mexican style of architecture. But elsewhere the appearance of the town shows that the Americans have appeared, and brought with them their usual energy and thrift.

All through southern California a somewhat singular distinction is made in the inhabitants. They are divided into the two classes, Americans and Californians. Under the former head are included all Anglo-Saxons, no matter whence they came or how long they have been in the country. Under the latter are embraced the Spanish and their descendants, and all mixed races, of which there are many. Under the old Spanish and Mexican rule the pure Castilians constitute the aristocracy of the country, and they are still first among Californians. The hybrid descendants of the Mexicans and Indians have the additional sobriquet of "Greasers" bestowed upon them.

Both the Los Angeles and San Gabriel rivers are by courtesy said to flow into the ocean, and are so represented on the maps; but as a matter of fact neither of them reaches that grand receptacle, but both lose themselves in the sand on the way. The San Gabriel after being lost once finds itself again, and makes a second effort to reach

the ocean, but finally succumbs to destiny and the sand, and goes down to rise no more.

In the valley of the Los Angeles the land produces without artificial irrigation for a considerable distance each side of the river. The surface is only seven or eight feet above the water-bed, and the soil is of a loose, sandy nature; so the trees send their fibres down till they reach the water-bed, and from thence draw their supplies of moisture. The arrangements for irrigation around Los Angeles are quite extensive and complete. The mountain streams are tapped, and the water taken hither and thither to give drink to the grape-vines and to the orange trees. These irrigating ditches form not an ungraceful part of the scene as it appears in riding about from orchard to orchard and vineyard to vineyard. The water is clear and limpid, and runs along with alacrity as though in haste to execute its benevolent mission.

It is not easy to conceive anything more beautiful than the orange groves in this region in February and March, when the trees are laden with their yellow fruit, which shines through the rich glossy leaves of the trees like golden stars in a dark sky. It is easy to transmute these yellow oranges into yellower gold.

Los Angeles is at present the center of the orange-growing business in California. The fruit will probably do just as well in San Bernardino, but the experiment has not been very thoroughly tried as yet. It does not thrive well anywhere on the coast, the winds from the sea being too cold. Even in Santa Barbara and the region around, which is the best sheltered of any place on the coast, oranges do not grow well except in protected places,

such as a cañon inclosed by mountains or in some way shut in and sheltered from the winds. A few miles from Santa Barbara Col. Hollister is trying the experiment in a cañon thus situated.

But at Los Angeles the orange finds itself at home, with but little to interfere with its constant prosperity. The trees come into bearing at from seven to ten years of age; when they are twelve years old, and thence on, they are expected to average twenty dollars per tree per annum. The price of oranges in San Francisco ranges from twenty to thirty dollars per thousand, the best sometimes being as high as thirty-five dollars per thousand. It is rather surprising to people coming from the east to find oranges so near the place where they are produced selling at so much higher prices than they do in New York and other eastern cities. Los Angeles oranges are seldom retailed at less than fifty cents per dozen, and oftener bring seventy-five cents. As yet there seems to be no danger of the supply exceeding the demand. An inferior kind of orange, brought from the islands, retails in San Francisco at twenty-five cents per dozen, and this is the lowest price at which the fruit is ever sold.

It is easy to see what a mine of wealth an orange orchard is at such rates. Sixty trees to the acre, and allowing one thousand oranges as the average yield per tree, would give a gross result of twelve hundred dollars. But as a matter of fact, trees in well-kept orchards sometimes average fifteen hundred oranges each. But let us take the lower estimate. It is found that one man can take care of twenty acres. Add to his wages the expense of picking, boxing, freight and commission, all of which

could not exceed three hundred dollars, and there would be left a net gain of nine hundred dollars per acre. How much surer and better an orange orchard is than a gold mine! For the former is absolutely beyond a contingency. Although young trees are at rare intervals injured by frost, when they have gained the strength and power of endurance which two or three years of growth give them they are entirely safe, and if the arrangements for irrigation are sufficient there is absolutely nothing to harm them or come in the way of their yielding a full crop every year.

Mr. Wolfskill, one of the oldest American settlers, has a grove containing two thousand trees, which, when sixteen years old, averaged fifteen hundred oranges per tree, and has continued to yield about the same each year since. Mr. Wilson has a grove of sixteen hundred and fifty trees, some of which have borne as many as four thousand oranges, and the average has been the same as in Mr. Wolfskill's orchard — fifteen hundred to the tree.

As a compensation for the orange tree being so late in coming into bearing, it lives long and continues to bear to extreme old age. A tree in the vicinity of the San Gabriel mission, twelve miles from Los Angeles, bore six thousand oranges when it was in the neighborhood of ninety years of age.

A gentleman in Los Angeles, in 1873, sold twelve hundred dollars' worth of oranges from the trees on half an acre. These trees probably received extra care, and some coaxing, in order to bring about such results. Hitherto but little attention has been paid to grafting. All the orange orchards of which mention has been made were

grown from the seed. The market has as yet been always good, and the price large for such oranges as were produced in that way; but I was told by an intelligent practical farmer, who has gone to Los Angeles within a few years, and is starting there a large orange orchard, that there is the same necessity and advantage in grafting oranges that there is in the case of apples and other fruits. It was his opinion that as the supply increased, the demand would be more dainty and a better quality of fruit required.

In order to show how the time required for oranges and English walnuts to come into bearing may be tided over, it may be worth while to state the plans and experiences of the gentleman to whom reference has just been made. In the year 1868 Mr. Wolfskill and his partner purchased three thousand acres of land in the Los Angeles valley, about four miles from the town. For this land they paid from four to eight dollars per acre — an average of about six dollars. In four years from the time of purchase, so rapidly had land appreciated in that vicinity, thirty dollars per acre could have easily been obtained for the whole tract. A large orange orchard was set out, and also orchards of English walnuts, almonds, and a locust grove for a supply of timber. The land lies on both sides of the Los Angeles river, and requires no irrigation. Artesian wells have been sunk and a sufficient supply of water for watering stock, and other uses, easily obtained. But, no part of the ranch is as yet productive. Meanwhile two families must have their support, and in one of them there are daughters approaching womanhood to be educated. The entire capital of the two partners

was invested in the land, except so much as was put into a "band" of sheep. These sheep are the bread-winners while the orange and the walnut trees are getting ready to take the burden upon themselves.

The sheep also buy the young orange trees and the walnuts needed for planting the orchards. They are not pastured on the ranch, but sent away under the care of shepherds to El Monte and elsewhere, to get their living off land that nobody owns — at least, nobody save that impersonal sort of an owner, the United States Government. During the last two or three years there has been no more profitable way of investing money in California than by putting it into sheep. He who had them was sure of a large profit on his capital once, if not twice, in the year.

A mile or two beyond the mission of San Gabriel is Sunny Slope, the estate of J. L. Rose, president of the Southern District Agricultural Society. This is confessedly the finest place in the region. A ride through avenues of walnuts, of olives and of oranges, while on each side of the drive the water is running merrily along on its way to do its duty in irrigating the orchards and vineyards, brings the visitor to the house, which is shaded by tall eucalyptus trees, and wide-spreading, beautiful pepper trees. Standing on the front verandah one looks down a broad avenue, overshadowed on each side by magnificent orange trees. This is *par excellence* the orange avenue. It extends a mile, with double rows of trees on each side. Mr. Rose has in all between six and seven thousand orange trees, but only a comparatively small part of them have come into bearing. He has one hundred and fifty acres in vine-

yards, wherein grow one hundred and thirty-five thousand vines, from which he made last year one hundred thousand gallons of white wine and three thousand gallons of brandy. A part of the crop that he sent to market last year consisted of two hundred and fifty thousand oranges, fifty thousand lemons, and twenty-five thousand pounds of English walnuts. Besides these tropical fruits he raises apples, pears and peaches in considerable quantities, and in addition to all these, pomegranates, figs, nectarines, apricots and olives.

The income from English walnuts is estimated at from six hundred to one thousand dollars per acre; from olives, at from two hundred to five hundred dollars; the vineyards produce from ten to fifteen thousand pounds per acre. This crop has never failed since vines were first set out by the fathers nearly a century ago. But Los Angeles is too far from a market for grape-raising to be profitable, except for making wine. Those who do not make wine themselves sell their grapes at the vineyards to those who do. The fruit sells in such cases at from one dollar to one dollar and twenty-five cents per hundred pounds. Mr. Rose irrigates his orchards every six weeks, and plows and hoes after each irrigation. This constant working is one of the reasons of the abundant bearing. As water is a fertilizer, the ground is kept rich as well as mellow. Weeds have no chance to grow, to absorb the strength of the soil; indeed, they do not seem to prosper in California; it is one of the peculiarities observable everywhere. In the northern part of the State, a spot of ground left uncultivated for a season is covered with an abundant crop of

wild oats. In the south the alfilerilla improves every chance to get a foot-hold.

To show what the possibilities of southern California are to the enterprising, industrious immigrant, it may be well to give, in brief, the history of Anaheim, a German settlement established in 1857. This village is twenty-four miles east of Wilmington, eight miles from the sea, and three from the Santa Ana river. Fifty men in San Francisco, of different occupations and persuasions, but all Germans, agreed together to buy eleven hundred and sixty-five acres of land in Los Angeles county, southwest of the town of the same name. The site of the village was, at the time of purchase, a dry, sandy, barren plain, no better than thousands of acres lying around it. The leader of the enterprise was a Mr. Hansen, of Los Angeles, a German of culture and ability, who had lived many years in California and knew well the nature of the enterprise in which he embarked. The land was bought for two dollars per acre, and divided into fifty lots, with streets between them. Each lot contained twenty acres. A town was laid out in the center with sixty building lots — one for each shareholder and ten for public purposes. The lots were all fenced by planting willows, sycamores and poplars, and one half of each lot was set out in grape-vines. With the first payment of stock the land was paid for. For three years Mr. Hansen superintended the improvements, while the stockholders continued in the pursuit of their various avocations in San Francisco. Indians and Mexicans were hired to do the work, and with their help the vines were set out, and an irrigating canal seven miles long was excavated, together with four hundred and fifty miles of subsidiary ditches, and twenty-five

miles of feeders for them. These arrangements secured the thorough irrigation of the whole tract.

Fruit trees of different kinds were also set out. In 1860 the assessments were all paid in. Each stockholder had paid the amount of twelve hundred dollars. The lots were then assessed, the value being fixed by the location or other incident that affected their worth, and were drawn by the stockholders. Whoever drew a lot that was estimated at more than twelve hundred dollars paid the amount of the overplus to him who had drawn one worth less than that amount. The owners then took possession, and went to work. In 1870 there were one million grape-vines growing in the settlement, most of which were in bearing. They produced annually four hundred thousand gallons of wine and ten thousand gallons of brandy. There were ten thousand fruit trees of different kinds growing. Every one of the fifty lots contained a comfortable homestead, and the village had a population of about four hundred, and contained a good public school, a post-office and a church. Each of the lots was valued at ten thousand dollars, and could not be purchased at any price.

The distance by the stage route from Los Angeles to San Buenaventura is seventy miles; yet between the two places there is no village and not even a post-office. The latter place is the principal town in Ventura county, which is a new county, set off from Santa Barbara in 1873. Those who named the county did wisely in abbreviating the unwieldy cognomen with which the town is incumbered. This latter, to which the fathers gave so extensive a title, was the seat of one of their missions.

The church and some of the other buildings still remain, and are in a sufficiently good state of repair to be used. There are three large and very old palm trees growing near the church, the largest I saw in California. They are from thirty to forty feet in height, and six or eight feet in circumference. These and an olive orchard remain to give their testimony in regard to the thrift and the taste of those old Spanish padres. The palm trees look very grand, growing up, as they do, straight and limbless to the top, which is crowned with a large tuft of palmetto leaves. The priests contrive to have boys go up these trees and gather leaves for sacramental purposes on Palm Sunday, thereby saving themselves from the cheat that is practiced in our more northern climates.

San Buenaventura contains about one thousand inhabitants, and is steadily growing. Situated as it is at the natural outlet of the wonderfully rich valleys of the Santa Clara and the Ojai, it cannot fail, at no distant day, to be a place of considerable importance. The valley of the Santa Clara river contains the richest and best agricultural land in the county. Here, as almost everywhere in southern California, the only want is water, and this want has been in part supplied by arrangements for artificial irrigation. The soil of the valley is a rich, sandy loam, and is said to require less moisture to perfect vegetation than many other varieties. Wheat and barley have been successfully cultivated, and the experiment, on a small scale, of raising sea-island cotton tried with success. The sugar-beet grows to a size that is quite enormous, some having reached the gigantic proportions of thirty or forty inches in circumference.

A gentleman, whose official duty rendered it necessary for him to make a careful examination of this lower Santa Clara valley, says: "My impression is, that this valley offers greater inducements to settlers from the east than any other in California. Lands are cheaper, society is growing up, schools are being established, the climate is excellent and well adapted to almost every variety of production. The valley is inclosed by ranges of mountains on both its north and south sides, which protect it from the cold storms and high winds, but being open to the ocean toward the west it has the advantage of the sea-breezes more than almost any other in California."

A ride up this beautiful Santa Clara valley, early in the month of March, was full of interest to the writer, and may in part account for the readiness with which competent testimony in regard to its desirableness is accepted. "Seeing is believing," and when one knows in part, evidence in regard to the rest which falls in with the knowledge possessed is easily credited.

A good team, a comfortable carriage, and pleasant company, are elements that make up about as desirable a whole as the imperfect conditions of this world can furnish. But when to these are added the brightest of bright sunshine, the purest and most exhilarating of atmospheres, and a temperature at the exact point of comfort, with mountains and valleys and cultivated fields and orchards in blossom to give beauty and variety to the scenery, it would be a very churlish soul indeed that could not find delight and satisfaction in such a combination. But it was not a churlish soul whose experiences on that day are to be narrated, but one determined to extract sweet

out of everything that had in it one particle of sweetness. What wonder then that the happiness of that day had a very unusual completeness!

In going up the valley we passed through the oil regions that help to make this locality famous. Instead of occurring in depressions and valleys, as in the eastern States, where it requires pumps to bring it to the surface, the oil here oozes out from the cracks and crevices in the mountains, wherever there is a tilt in the dip or a fracture or an angle. I do not speak after scientific methods, but as things looked to common, every-day eyes. Wherever the oil finds a crack out of which it can creep it improves the opportunity. After going up the Santa Clara valley some twenty or twenty-five miles, we crossed over the mountains which divide it from the San Buenaventura valley, through the Santa Paula pass, and on our return passed through the Ojai valley, and back to the town by the side of the San Buenaventura river.

One of the curious sights that we witnessed during the ride was a stream of oil which ran out of a crevice in the mountain and fell into a creek which was on its way to the San Buenaventura river. The rivulet, where we observed it, was twenty or thirty feet wide, and in its center there was a stripe of oil six or eight feet wide, which, grimy black and unctious, kept on its winding course, carried by the current hither and thither, as the stream turned and twisted and curved in its onward passage. It looked like an immense serpent, with a capacity for swallowing any impediment that came in its way. It was an uncanny sight to the eye of taste, and an uncomfortable one to the eye that looked at things with a

regard to their pecuniary value; for what a waste it was to have this oil running away and losing itself when it ought to be creating values by being headed up in barrels and afterwards refined!

The *maestro* of our company was at that time the principal operator in oils in that region. The business, just then, was in rather a depressed condition. It had been found that, easily as the oil was obtained, it could not be refined and put into the market at a price to compete with eastern oils. But very shortly after the date of our ride there was quite a revival in the trade occasioned by the successful results of experiments in San Francisco, whereby it was found that gas could be made from the crude oil at much lower rates than it could be from coal. It therefore happened that the snaky stream of oil was soon arrested, barreled and sent to San Francisco, to be turned into bright and shining lights.

The pleasant town of Santa Barbara is thirty miles northwest from San Buenaventura. The road connecting the two places is singularly romantic and delightful. For nearly half the way it lies directly on the beach, and the horses trot along with the ocean surges bathing their feet. When the tide is in, or coming in, persons traveling with animals not used to the wash and roar of the waters are sometimes obliged to stop by the way and wait for hours till the tide goes out. The ride between these two places is memorable to the writer, not only for its picturesqueness and the beautiful ocean views, but also as affording the first opportunity of seeing a whale. What a monster it was! An *immensa molis* as truly as the famous wooden horse of the Greeks. Wounded by a har-

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poon, but escaping its pursuers, it had died in the ocean and been stranded here, thrown on the beach by the waves that had not power to take it away again. There lay the huge carcass, with the oil, set free by the hot sun, oozing out in every direction. It was eighty feet long — twice the length of a good-sized house — and so high, as it lay prone on the sand, that standing near the side I could not see over it. Like the curious Trojans examining the votive offering of the Greeks, I walked round and round it. It seemed impossible that one single life could have animated so immense a mass of matter. Figures or statements of measurement give no adequate idea of its immensity. I could readily believe that not one man only, but a whole family, might easily find accommodations in its interior apartments, provided they would take the risk of furnishing their own means of respiration.

The end of this pleasant drive was Santa Barbara. It is only within a few years that this town and the region around have excited the attention which they well deserve. While mining interests were dominant the attention of emigrants was centered in those parts of the State where such interests were best advanced. But in the time back of American occupation it was not so. The Aborigines showed their appreciation of natural advantages, and their adhesion to those conditions which guaranteed a healthful, joyous life, by congregating in this pleasant region. When Cabrillo examined the country along the coast, only fifty years after Columbus discovered America, he found no part of it so thickly populated as this. He spent six months in what is now Santa Barbara county, and has left upon record the names of forty towns and villages

that then existed within its limits. Thus more than three hundred years ago a large population enjoyed the sunshine and the pleasant climate of this delightful country.

As Santa Barbara is attracting much attention at the present time as a health resort, and as many are desirous of ascertaining what its special claims are in this behalf, a fuller statement of facts than usual will be given of this particular section of the State. What has come to the writer's knowledge, both experimentally and through competent testimony, will be mentioned, after which a catalogue will be given of the resources, in the way of soil and productions, which make the place inviting to those who, already blessed with health, seek here a competency and a home. When an artificer is the possessor of knowledge and skill, the result of his effort will be in proportion to the resources at his command. Here were all material and all power in the hands of the Great Creator. Behold how skillfully the arrangements were made and the combinations effected in order to bring about the desired result, and fit up a great sanitarium, from which a voice should go out to the sick and weary everywhere, saying, "Come ye disconsolate, where'er ye languish," come, bask in this sunshine and breathe this refreshing air, which will warm without heating, and cool without chilling you!

But as to the means by which this desideratum is brought about. First, from Point Concepcion to San Buenaventura, a distance of seventy miles or so, there is a trend of the coast toward the east. This direction of the shore gives it a southern exposure, and spreads out its lap to receive the sunshine. This is the only coast-line that faces south between Alaska and Guatemala. The town of Santa Bar-

bara occupies nearly a central position in this line. Next, the Santa Inez mountains, a branch of the Coast Range, stretch across nearly or quite the whole seventy miles, parallel with the coast, and inclose a valley between them and the ocean which has an average width of about three miles. These mountains lift up their heads three thousand feet toward the heavens, and form an effectual barrier to all the harsh and inhospitable winds that would find access from the north. Then, as if to make assurance doubly sure, a group of islands are dropped in the sea, having their length parallel with the coast, and lying twenty-five or thirty miles out in the ocean. These islands hold up a barrier of high hills, which says effectually to any stray winds that come down from the Arctic and are seeking a place of entrance, Hitherto ye have come, but ye can go no further! Thus these faithful guards keep watch and ward over the beloved land, and maintain it in a state of almost perpetual tranquillity.

As a worthy adjunct, the beach spreads out a level and attractive carriage-way, where those who ride may sniff the wholesome air of old ocean and watch its restless tossings and ever-varying beauties. The arrangements for sea-bathing are complete, so far as natural facilities can make them. Spurs of the Santa Inez mountains come down on each side, and lock in a little cove by reaching out their protecting arms, about a mile and a half apart. How could there be a nicer and safer bathing-place? For those, however, who prefer more limited accommodations or warmer water, a Bethesda is hidden away in a cañon four miles from the town, in which sufferers may wash and be made better, if not entirely whole. The waters

of this hot sulphur spring are said to have power to drive rheumatism from the joints, and expel other demons which may have gained power over the flesh to torture and to destroy.

These peculiarities of situation and environment secure to Santa Barbara all the conditions required by those who, on account of weak or diseased lungs, need an equable, bracing climate, for it is warm without being hot, and cool without being chilly. There is scarcely ever a day when the most delicate invalid cannot be out-of-doors some part of the time. Even in the rainy season, which lasts from November till March, some portion of almost every day can be safely and pleasantly spent in the open air. That there cannot be many days of continuous rain is clearly proved by the fact that the entire rain-fall averages but twelve inches per annum. But a case is made stronger by cumulative evidence. Dr. Brinkerhoff went to Santa Barbara on account of poor health eighteen years ago, since which time he has been a leading physician in the place. He says: "The heat of summer is tempered by gentle breezes from the sea, the average summer temperature being less than 70°. The average winter temperature is 58°. The changes of the season are scarcely perceptible in temperature. Frosts are of rare occurrence, and disagreeable fogs seldom prevail. There are comparatively few days in the entire year when one cannot sit out-of-doors without discomfort. The nights are always cool and sleep-inviting. The softness and general uniformity of the climate, its freedom from dampness and sudden changes, the opportunity for diversion and recreation, render Santa Barbara preëminently a de-

sirable place for persons suffering from bronchial and pulmonary affections. Although many persons suffering from these complaints have come here too late to receive any permanent relief from the restorative effects of climate, yet the greater portion of cases which have come under my observation have been permanently relieved, and many in a surprisingly short space of time have been perfectly restored to health. Some ten miles from Santa Barbara, in a westerly direction, in the bed of the ocean, about one and a half miles from the shore, is an immense spring of petroleum, the product of which continually rises to the surface of the water and floats upon it over an area of many miles. This mineral oil may be seen any day from the deck of the steamers plying between here and San Francisco, or from the high banks along the shore, its many changing hues dancing upon the shifting waves of the sea, and affording various suggestions both for the speculative and the speculator. Having read statements that during the last few years the authorities of Damascus and other plague-ridden cities of the east have resorted to the practice of introducing crude petroleum into the gutters of the streets to disinfect the air, and as a preventive of disease, which practice has been attended with the most favorable results, I throw out the suggestion, but without advancing any theory of my own, whether the prevailing westerly sea-breezes, passing over this wide expanse of sea-laden petroleum, may not take up from it, and bear along with them to the places whither they go, some subtile power which serves as a disinfecting agent, and which may account for the infrequency of some of

the diseases referred to, and possibly for the superior healthfulness of the climate of Santa Barbara."

About four miles from Santa Barbara, pleasantly located in one of the cañons of the mountains, are the hot sulphur springs which have become so favorably known. If it is true of places, as well as of persons, that nearness and familiarity are the true test of greatness and worth, then Santa Barbara must have the ring of the genuine metal about it! Its number of admirers seems to be equal to the number of its entire population, and can only be estimated by taking the census!

A preacher, who has for some time been a resident of the place, on one Thanksgiving day delivered a sermon appropriate to the occasion to his assembled people. He did not wander off to the ends of the earth for causes for thankfulness, but showed his hearers what reason for ceaseless gratitude they had in being allowed to dwell in so Paradisaical a place as Santa Barbara — a place of unparalleled richness of soil, of unequaled salubrity of climate — a place for which earth, air and sea did their best. That little spot alone of all the earth seemed to have escaped when the earth was cursed for the sin of man! After dwelling for some considerable time upon the features of this perfectness, the thought seemed to occur to the speaker that after all the taint of transitoriness which pertains to everything earthly rested also upon Santa Barbara and those who inhabit it. As, therefore, people could not live there always, some inducement must be presented to make them willing to leave when the inevitable summons came for them to go to heaven! Therefore he endeavored to bring about a reconciliation between their

necessity and their desire, by a description of the pleasures and delights of the new Jerusalem, remarking that inasmuch as it was a foregone conclusion that they would sooner or later be forced to take their departure from the land of delights in which they were now permitted to live, it would be well for them to acquaint themselves with the conditions upon which entrance to it could be obtained, assuring them that the glories and wonders of the place made it worthy of being earnestly sought after. The conclusion of the whole matter, as summed up by one who heard the sermon, was that heaven was a very comfortable place to live in, and very desirable to — those who couldn't stay in Santa Barbara!

To the writer, personally, a sojourn there gave new ideas of the possibilities of life. The atmosphere was so pure and exhilarating, the sky so blue and serene, the sunshine so bright and cheering, that mere existence seemed a blessing rich beyond compare. Visions of beauty and blessedness float before my eyes and fill my heart with yearnings as I recall the experiences of those delightful days. Whether I looked above, beneath or around me, there was something to charm, something to comfort and delight. The usual taint that affects all earthly things seemed to be wanting, at least it did not make itself visible to the eye. Sky, earth and air, all seemed to be absolutely without a flaw.

Santa Barbara is the preferred home of the beautiful pepper tree. Those who have only seen it further north have no adequate idea of its possible loveliness and elegance. The tree produces the white pepper of commerce, but so far as I know, it is not utilized in this region, and

it ought not to be. Nothing more ought to be asked of it, than that it should beautify and adorn, as it does, every place where it grows. With the graceful sweep of the weeping willow it unites a refined and aristocratic look which the willow does not possess. Then it is an evergreen, and retains its handsome foliage to charm the eye all the year round. The fruit hangs in large, loose panicles all over the tree during the winter, and by its pretty red color gives additional grace and glory to the effect.

There are many varieties of acacia that flourish in California; and the eucalyptus, or Australian gum, is a great favorite and much cultivated. These are all evergreens, and some of them beautiful; but among them all there is nothing equal to the graceful, refined-looking and beautiful pepper tree.

The olive, too, seems to be in as good as its native element in this region. The leaf of the tree is long and narrow, and not unlike that of the willow. It is bluish green above, and on the under side of a lighter color, with a silvery tinge which produces a very pretty effect when the branches are tossed by the wind.

The fruit of the tree has been utilized from an early day, and its cultivation is among the things that pay. It may not be without interest to go somewhat into detail in regard to this industry. In the Santa Barbara region the olive is propagated by cuttings. These are made from ten to fifteen inches long, and the thicker the better. The slips are put into the ground perpendicularly about six or eight inches apart. Everything seems to be delighted to grow in the beautiful country around Santa Barbara, and the olive is not an exception. These cuttings soon send out

roots and branches. After awhile they are taken up carefully and set out in orchards, being placed in rows twenty-five or thirty feet apart each way. The trees grow slowly at first, but begin to bear in four or five years. They do not, however, produce a full crop until they are ten or twelve years old. But as a compensation for their slow growth and tardy maturity, they live and produce fruit to a venerable age. A tree, that had lived through its three-score and ten years, last year bore one hundred gallons of olives. The average yield that is expected of an orchard is about twenty-five gallons per tree.

For pickling, the olive is gathered before it is ripe, though the nearer it is to maturity, and a consequent change of color, the better and richer the pickle. It is from the color of the fruit in this unripe state that the shade "olive green" takes the name. When ripe, the fruit is of a purplish, maroon color, and in both size and color has a striking resemblance to the damson plum. For making pickles, the immature olive is gathered and put into vessels filled with cold water, which must be changed for four or five successive days; or better yet, they are sometimes placed in casks through which the water is allowed to percolate. The object of this process is to extract from the olive a bitter quality that is always present. When this process is completed the olives are put into a strong brine, and in a few days are ready for use. Persons who do not like imported olives often become fond of those put up in Santa Barbara, on account of their superior richness and excellence, which is in part owing to their being allowed to become more nearly ripe before they are gath-

ered. When the berry is to be used for making oil it is allowed to ripen on the tree.

When gathered, cloths are spread under the tree and the fruit is shaken off, and that which does not fall readily is beaten off with rods or poles, which would seem to have been the way in which olives were gathered in Palestine, as can be inferred from the command, "When thou beatest thy olive tree, thou shalt not go over the boughs again; it shall be for the stranger, for the fatherless and for the widow."

After the fruit is gathered it is placed in a drying-room or on shelves, where it is allowed to remain several days, in order that the watery juices contained in it may evaporate. The machinery now in use for manufacturing the oil is of the rudest and most primitive character, and will probably before long, when the rule of the Anglo-Saxon is fully established in this region, give place to something better. A circular stone bed is built, and upon this a stone is placed to which a sweep is attached. A horse is fastened to the sweep, and the berries being spread upon the bed, they are crushed by the turning of the stone upon it. Even this would seem to be an improvement upon the Jewish method, which seems to have been to tread out the oil with the feet. Thus the dying Jacob said of Ashur, "Let him dip his foot in oil."

The stones or pits of the olive are not broken in the first process of crushing. After the fruit is fairly crushed the pulp is gathered up and put into coarse sacks or gunny-bags, and submitted to pressure in a home-made, rough sort of a screw. As the oil is extracted it is put into vessels and allowed to settle, after which, without any

further process, it is ready for use. The result of the first operation makes what is known in commerce as "virgin olive oil." Its sweetness and purity are perennial. Time does not harm it, and no change renders it impure. At the old Catholic mission in Santa Barbara there is oil that has been kept for years without losing any of its original virtue. We have been in the habit of getting very little of this "virgin oil" from abroad. The best is kept at home for the rich and great to use, that they may have unction given to their salads, and sweetness to any of the viands into which oil enters as a component part.

A second pressure succeeds the first, in which many of the pits are cracked and the pulp more finely comminuted. The result of this is an inferior article of oil, such as is generally brought to us for table use.

After this there is still another effort made to compel the olive to give up its oil. The pulp is brought to a boiling heat in large copper kettles, and then submitted once more to pressure. An inferior kind of oil is thus obtained, which is principally used for lubricating purposes.

In the good time coming, when the twenty thousand olive trees already set out in southern California, and the ten times as many more that will be set out, shall come into bearing, and when new and better machinery, the result of Yankee ingenuity, has been introduced, we shall get our olive oil from our own dominions, and it will be the pure "virgin oil," that will neither grow murky nor rancid, and our salads will be no more spoiled by oil that is common or unclean!

The profitableness of the olive as a factor for money-making will be evident by the statement that sixty or

seventy trees may be set out to the acre, and that from these there should be obtained about one thousand four hundred gallons of berries. Olives are worth, sold in the orchard, sixty cents per gallon, or when pickled, seventy-five cents per gallon. Twenty gallons of berries yield about three gallons of oil, which is worth from four to five dollars per gallon wholesale. It is more profitable to make the berries into oil than to pickle them.

There is an olive tree in Santa Barbara that is thirty years old, from which has been made forty-eight dollars' worth of oil each year for three successive years. It is estimated that an olive orchard will yield about nine hundred dollars, gross, per acre. Allowing half of that amount for cost of culture and manufacture, which is an over-generous estimate, and there remains a very handsome income from the investment. It is a particularly pleasant arrangement for those who have not much land — only a town lot or two — to set out olive trees, which will not only furnish shade all the year, but in the season produce fruit that can be turned into money.

The fruit in its ripe state is very nutritious, and people can live on it for days without other sustenance; but it has a bitter, acrid taste, which makes it anything but attractive to the uninitiated. The olives of California are said to be better than those of France or Spain, probably because they have a better chance to absorb the sunshine, and a richer soil from which to draw their nourishment. There is a grove of old olive trees near the mission church which was set out by the Spanish padres fifty or sixty years ago. These trees are still a source of income to their owners. This old mission church was established in 1786.

It is about two miles from the wharf, on a plateau which rises all the way, gradually, from the beach, until where the church stands it is more than three hundred feet above the sea-level. As these old Catholic churches are all built after one general plan, it may be well to give a more particular description of the one at Santa Barbara, and "*ab uno disce omnes.*"

The church is built of sandstone and adobe in the Moorish style of architecture. It is quite imposing seen from afar, with its two high towers and rather grand and massive air. The walls are over five feet thick, and the cement that unites the stones cannot be broken with a pick. I make this statement, not from experimental knowledge, but from testimony that I find on record. The ancient tile roof has been replaced by one of shingles. Tile roofs were not among the least curious things brought to light and knowledge by the chance to see the handiwork of the Spaniards. A cylindrical pipe, made of red-burnt clay, not far from the size of an ordinary stove-pipe, cut in halves longitudinally, and from two to four feet long, is as accurate a description of these tiles as comes to hand. Two of these are laid parallel with each other, and a third is laid over so as to cover the space between them. There are little gutters along the sides to carry off the water. They are very clumsy looking affairs, and would seem to be a heavy weight for any rafters and walls to support. The adobe houses of the Mexicans are covered with these tile roofs.

"The largest grape vine in the world" is another of the meritorious things that Santa Barbara claims. This grows at Montecito, about three miles from the town. It was

planted toward the end of the last century by a Spanish lady, who came from Sonora on horseback. There is a bit of romance connected with it that gives a little additional interest to the wonderful vine. When the young lady was about starting from Sonora her lover broke a branch from a grape-vine and gave it to her to be used as a riding-whip. The giver sanctified the gift to such an extent that the lady kept the whip to the end of her journey, and then, to make it a perpetual memento, planted it in the ground. The vine took root and grew, until its greatness astonishes the people. The trunk is four feet four inches in circumference. After reaching the height of eight feet from the ground, it sends out its branches, which are trained on horizontal trellises that are supported here and there by posts, and thus the vine is made to cover an area of five thousand square feet. Its annual yield for many years has been from ten to twelve thousand pounds of grapes. There is a fig-tree near by it to which some branches of the vine extend, so that the lady who planted the latter could literally sit under her own vine and fig-tree. The planter of the vine died not many years ago, having done what but few are permitted to do — entered a second time into her "teens." Report says that she was one hundred and thirteen years old at the time of her death; a striking proof that the climate of Santa Barbara is conducive to length of days.

The latest news in regard to this celebrated grape-vine is, that it is boxed up and on its way to attend the Centennial at Philadelphia, where all the world is to be gathered together. But it will come stripped of its glory, and its beauty will be henceforth only a memory.

Santa Barbara, beautiful as it is for situation, is attractive also to the fortunate ones who do not need to search for lost health. The mountains round about it are charming at all times. They are especially so at evening, when there hover and rest upon them the rosy tints and soft azure haze that travelers say are seen in Italy and other countries on the Mediterranean. One evening, when the sun was setting, the mountains on the eastern side presented a picture which will be to me "a joy forever." I wish that I could worthily describe it, so as to give even a faint idea of its glory and its grandeur. The mountain is corrugated, as all the foot-hills of the Coast Range are. The sun, in going to its rest, shone in such a direction as to make the different points and projections cast their shadows on the adjoining depressions. So the hill-side was flecked over with a rich green, which was now golden in the sunlight, and then subdued and saddened by a shadow, like life with its ever-varying shades of joy and sorrow. Upon the top of the mountain there rested a mist — a soft azure veil just dipped in the tint of the rose, which, while it concealed nothing, softened the outline and spiritualized the whole. I watched it far into the gloaming, and saw the light go out gradually and gently, like the light of life to the dying saint, changing every minute, yet each change revealing some new beauty, till, finally, the brightness faded away, and one star after another came out to see. Meanwhile, near by was the ocean, calm as though it had quieted itself for unwonted rest, catching and reflecting the beautiful tints which the mountain-top threw down to it.

To the traveler from the east who makes Santa Barbara

the first stopping-place in southern California it has a very foreign look. It is a little difficult to believe that the protection of the tricolored flag is over this place also, with its old adobe houses that look as though they had a heavy burden to support in the clumsy tiles which perform the office of roofs for them. The adobe of which these houses are built is simply clay moulded into forms like brick, though generally larger, and dried in the sun. All the adobe houses in southern California have only one story and one tier of rooms, so that there could be no quarrel as to who should have front rooms. Many of them are destitute of chimneys and guiltless of windows; somewhere, generally from a small room in the rear of the main building, a stove-pipe can be seen emerging from the roof, declaring the throne-room of the cook. Where there were no windows, as in the poorer houses, the light of the dwelling had to come in through the open door.

The Spaniards who built these towns seem to have eschewed geometrical figures and held in abhorrence all straight lines. Everywhere the streets are crooked, looking, many of them, very much like some of the "ways" in the "Hub."

It was curious to see the mixture of colors in the faces of those met on the streets. With the normal white of the Anglo-Saxon there was mixed almost every shade of brown, yellow and black.

The population of the town is now about six thousand, one half of whom are Americans. The gain of the latter has been very rapid during the last few years. In 1865 only twenty-one Americans could be gathered together to celebrate the birthday of our nation. Now the number of

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voters is about equally divided between Americans and Californians.

It is only within a comparatively recent time that the benefits and advantages and delightsomeness of this Santa Barbara region have been understood and appreciated by any but those who were on the spot. Under the somnolent influence of Mexican rule everything languished. The accommodations were too wretched to attract strangers, or allow of their staying even if they chanced to come. A general lethargy prevailed, which checked all development and all enterprise. But American energy has already accomplished much, and promises more. Everywhere there is evidence of the change — in the quickening of all kinds of enterprise, in the improvements that are manifest in making the crooked places straight, in the increased accommodations for visitors, as well as in their better entertainment.

The variety of fruit that can be raised in this region is very great. It comprises apples, pears, peaches, plums, olives, almonds, apricots, nectarines,— in short, all the fruits of the temperate zone, as well as of the semi-tropical belt. Oranges do not do well, except in places where they are protected from the winds off the ocean. The growth of fruit-trees is very rapid. Peaches and figs sometimes bear the second year and apples the third. The soil is everywhere wonderfully rich and strong. There is one thing, however, that must be made sure of — water. Like emphasis to the orator, this is the first, second and third requisite. Let the supply of this be sufficient, and there is scarcely any limit to the variety or amount of production. Extravagant as these statements may seem to those who

have not been there to see, they are very easily credible to those who have.

As yet there are but two ways of access to Santa Barbara — by steamer from San Francisco, and by rail from the same point to Hollister and thence by stage. The stage ride occupies about sixty hours, including a few hours' rest at San Luis Obispo. It is not unattractive to those who have the strength to endure it. To the writer, who went down by sea and came back by land, the latter mode of transit seems much the more attractive of the two. The hours of sea-sickness, and the almost total loss of time, so far as any increments of knowledge were concerned, did not make the sea-voyage acceptable at the time or pleasant in the recollection; while in the journey by land there was much that was interesting and that returns pleasantly to the memory.

The views enjoyed in ascending and passing over the Santa Inez mountains, just after leaving Santa Barbara, are among the valuable possessions which will be retained. After starting, the road leads along between the mountains and the sea for about ten miles. Then the ascent of the mountains is begun. The road goes through Gaviota pass. As the stage winds slowly up the elevation magnificent views can be obtained, made up of mountain and valley and sea, the latter stretching off into the infinite.

They have a curious way of always changing the driver and the coach at the same time on the Pacific coast. I found this custom prevailing everywhere. Each driver has his own coach, or one of which he has the exclusive proprietorship. When we made our first change after leaving Santa Barbara, we were put into a very delapidated wagon,

which was minus a cover and everything else that was necessary to comfort. The prospect of riding the greater part of the night in this uncomfortable vehicle was not an attractive one, especially as the clouds were throwing down upon us occasional drops of rain, which, there was good reason to believe, were only an earnest of what was coming in the very near future; therefore, when at about four o'clock in the afternoon we drove up to quite a comfortable looking adobe house I was so urgently advised to stop over and wait for a more comfortable coach the next day, that I concluded to do so. The twenty-four hours' delay gave me an interesting experience.

Mr. Foxon, at whose house I stayed, is an Englishman, and claims to be the oldest Anglo-Saxon settler now living in California. He has been more than fifty years in the State, and has lived where he now does since 1836. He brought his family there the year following. There was no settler or settlement near, and the household lived under a tent while the father built the adobe house which they now occupy. Some of his accounts of the doings in those early times bordered so nearly upon the marvelous as to be rather a tax upon one's credulity. Among many other things that were passing strange, he told how upon one occasion his house was surrounded by grizzly bears, and he standing in the door, with his wife to help him load his gun, had killed eleven of the monsters! He had often been with Kit Carson in his exploring expeditions, and shared his dangers and his hardships. He had also engaged in enterprises under the leadership of Fremont. His wife was Spanish, and in all the half-century they had lived together she had not learned so much of his native tongue

as would enable her to ask or answer the simplest question. Eleven of their eighteen children were still living, several of them in the vicinity. They were educated at the Santa Inez mission school, about eighteen miles distant. Mr. Foxon's possessions extended over many leagues, and his flocks and herds were numbered by thousands. A few years ago, on account of a severe drought which killed the feed, the family lost in a single season fifteen thousand sheep and seven thousand cattle, and yet in the twenty-four hours I stayed there, and the four meals I ate, I saw neither milk nor butter, nor anything into which milk enters as a compound, and no fruit of any sort. Neither did I see anywhere around the house anything that looked like a garden, or any preparations for raising vegetables for the future. In answer to some questions having a bearing upon the subject, Mr. Foxon said that it was too windy to raise fruit; he had tried two or three times; had set out trees, etc. Of course a Yankee would have found a way to remedy this difficulty by seeking a sheltered place, which must have been easy to find, where the surface was so uneven and hills near by, or he would have constructed a shelter to keep off the wind. Mr. Foxon said he supposed they might milk a cow or two, and have milk and butter; but they had sheep corraled near by, and if they had cows they would be obliged to rise early to milk them and get them out of the way before the sheep were let out, which would be a trouble; so they lived on meat and bread (unaccompanied by butter) and eggs, and creamless coffee. But, as if to make up for the quality, they increased the number of their meals. Although the breakfast was not over till somewhere between eight and nine o'clock, they had four

meals per diem, the last being supper at six. The extra occasion was made up of tortillas and tea about four o'clock in the afternoon.

I think I was quite a God-send to the old gentleman, and he made the most of the blessing. In this retired place it was something to have an attentive listener for a whole day. How constantly he talked, and how much he told me of the early times, the Indians, the bears and other wild beasts! He did not think that the coming of the Anglo-Saxons, and their settlement in the country, had increased the content and happiness of the inhabitants. As for their enterprise and improvements, what was the use of them if people were happier without them? There never were people that lived lives so easy, so full of contentment and actual happiness as the Californians did when under Spanish and Mexican sway. The delightful climate and fertile soil made it easy to support life, and what they had was shared by all who needed it. The coming of Americans introduced selfishness, the greed of gain, and all the thousand ills that follow in their train.

In an interval of rest in the conversation, when Mr. Foxon went out for a walk, I looked around everywhere for something to read. Not a book, not a newspaper, old or new, was to be found; not even an almanac was visible. It seemed strange to see people living so absolutely isolated — cut off from all the interests that affect the race, both in the past and present. Three sons and a daughter were still at home. One of the sons bore himself with the air of a prince, and when I came away, to assist me in starting, bestowed upon me numerous little civilities in a most gentlemanly and even courtly manner.

We reached San Luis Obispo, the principal town in the county of the same name, about two o'clock in the morning, and were allowed to rest until seven, when we started onward again. We saw the old mission church which was built in the early mission days, and gave name to the town and county. Soon after leaving San Luis Obispo we crossed the Santa Lucia mountains, a spur of the Coast Range, and were then in the Salinas valley. This is a fine area of land, about seventy-five miles long and from three to five miles wide.

About one-half of the valley lies within the limits of San Luis Obispo county. We crossed the Santa Margarita ranch, belonging to Mr. Murphy, soon after descending the mountains. This ranch has within its boundary twenty-five thousand acres of land, and upon these acres roam seventeen thousand head of cattle, all of which are owned by Mr. Murphy. As we rode along in the stage a gentleman, who was well acquainted in that region, pointed out a place that had been disrupted and thrown into confusion by an earthquake not many years before. Large fissures were made in the ground, which closed again with a suddenness that allowed them to swallow up horses and cattle that were feeding on the spot in unconscious ignorance of the casualty that awaited them. Quite a number of horses disappeared in this catastrophe, some of which left their tails or their feet sticking out of the cracks so as to identify the cause and place of their departure. These were their only mementoes.

Twenty miles north of San Luis Obispo we came to the Paso Robles ranch. This lies on a beautiful level plain, and includes ten square miles. The Paso Robles

springs are on this ranch, and are quite a place of resort. There are two or three large buildings for the accommodation of visitors, and they seemed to be well filled when we were there. The water in a spring near the house is scalding hot, while in one but a mile distant it is icy cold, but in both it is strongly impregnated with sulphur. There was quite a civilized look around these springs, and much was said in commendation of the healing power of the waters. The greater part of this day's ride was through the Salinas valley, and there was much to make it attractive. The sun was bright and not too warm, the air was pure and the sky cloudless. The country looked like a grand park. Large oaks stood here and there as a skillful landscape-gardener would have placed them in order to get the best effect. There were no thickets, and only trees enough to give beauty and variety to the scene. The ground was covered with a luxuriant growth of alfilerilla, a native product, which is of a peculiarly soft and pleasant green. Without looking at all sickly, it has a yellowish tinge, which seems to give peculiar effect to the variations of light—to the alternations of brightness and shadow. This alfilerilla made the groundwork, then the pattern was filled in with flowers, "whose beauty and whose multitude rivaled the constellations." The California poppy (*eschscholtzia*) was in full blossom, and with its yellow petals shading off from a deep orange to a light straw color, according to the variety to which it belonged, covered oftentimes acres of ground. Sometimes a whole hillside was one solid mass of molten gold, or seemed to be, looking at it from a distance. Many sovereigns might have had their meetings on places covered

with "cloth of gold" without any help from the upholsterer. In other places purple prevailed, and over a large extent of space this royal color was spread out. Again flowers that were red or blue would possess the land, and afford a chance for comparison as to which of the different hues was most agreeable to the eye.

To one pair of eyes at least the solution was easy. After seeing yellow hills by the score, and red and blue and purple fields, there was something very restful in looking at the soft, polished and comforting green, unmixed with anything that was flaunting or gaudy. The summing up of the verdict was, although these bright hues are beautiful for variety, yet if choice must be made for common use, "green it shall be," for green suits the eyes best,—another proof that, among things as among persons, the brilliant and showy may please us as occasionals, but for every-day wear the quieter and more durable are better.

Soon after leaving Paso Robles we came to San Miguel. The old mission church is still standing and is in quite a good state of preservation. The adjoining wing, which was erected for the use of the priests, is now perverted and polluted by being turned into a dram-shop, to our personal regret and the increase of our fears.

Our driver had for some time been giving unmistakable evidence of having taken a great many drops too much, and he now increased his potations and our danger. He lingered over his cups and made an unreasonably long delay. We finally started, and for the next ten or fifteen miles ran such a race as would have left John Gilpin's famous steed far behind. Up hill and down, through

rivers and quicksands, we went at a speed that seemed to one unused to racing more than a two-forty pace. We crossed the Salinas twice, splashing through each time as though running for a wager or for life. When we finally stopped at the next station for a change of horses our poor team was all dripping with sweat, and every muscle was quivering with the strain to which it had been subjected.

We started on with fresh horses with almost equal rapidity of motion, nor did the race end until we stopped at the philosophically named town of Plato, and changed team and driver. In all the eighteen hundred miles that I traveled by stage upon the Pacific coast that was the only "stage fright" I had — the only case in which I had any cause to doubt the skill or competency of the driver.

In southern California especially, the drivers, as a class, seemed to be intelligent, gentlemanly men, to whom it was safe for a lady to trust herself, and upon whom she might depend for any attention or help she needed.

The Atlantic and Pacific railroad, as now surveyed, will pass through the Salinas valley, and when the fortunate day of its completion comes this county will make rapid strides in the race for prosperity. There will then be an outlet for the products of the fertile valley of the Salinas, and tillers of the soil will find out how much better than gold-mines are the riches that honest toil can bring forth from the ground.

CHAPTER VI.

THE GREAT VALLEY.

THE Great Valley, or central California, is that part of the State inclosed between the Sierra Nevada mountains on the east and the Coast Range on the west. It is about five hundred miles in length, with an average width of fifty miles, and contains sixteen millions of acres of land, more than half of which is tillable. Although in configuration a unit, the valley is generally considered as divided into two, the Sacramento valley, so called from the river of the same name which flows through it, and the San Joaquin valley, which is also named from the river traversing nearly its entire length. The Tulare valley is a continuation of the San Joaquin, and is named from a large lake within its borders.

The two mountain ranges which bound the entire valley come together on the north at Mount Shasta, and on the south at Fort Tejon. The land thus inclosed is trough-shaped, descending from each side toward the center. The Sacramento river rises at the base of Mount Shasta, and flows nearly due south throughout its whole course. The San Joaquin rises in the south, and coming northward meets the Sacramento, and with it empties into San Pablo bay, which empties its waters through the straits of Carquinez into Suisun bay, and that again through some unnamed straits into the bay of San Francisco. The mingling of the muddy water brought down by these rivers

with the clear water of San Francisco bay sometimes produces very curious effects. When the wind disturbs the surface of the water, as it almost always contrives to do, some of the waves are clear and pure looking, while others are dark and turbid, making the bay look mottled and strangely variegated.

These two rivers, the Sacramento and the San Joaquin, are the only rivers in California that are navigable for any considerable distance. The two valleys are the great wheat-fields of the State. The San Joaquin has the advantage as to quantity and, probably, also as to quality of land. It contains twelve thousand square miles, or seven million six hundred and eighty thousand acres. The Sacramento valley contains eight thousand square miles, or five million one hundred and twenty thousand acres, being less by about one-third than the former.

The northern part of the Sacramento valley, although less fertile, has the advantage over the region further south in a greater rain-fall. As far north in the State as Red Bluff, there has never been an entire failure of crop for want of sufficient moisture, while in the San Joaquin valley it is thought not safe to expect to gather in harvests more than four years out of every seven! Rather fearful odds for a farmer!

The annual rain-fall in the San Joaquin valley averages about twelve inches. Stockton is at the head of the valley, and the entrepôt of its trade. It is one hundred and seventeen miles by the river from San Francisco, with which it is also connected by the western division of the Central Pacific railroad. It is a flourishing place of twelve thousand inhabitants.

These two great valleys suffer from two unfortunate conditions, though in the one valley the misfortune is greater than in the other. They have both too much and too little water. There are about three millions of acres of swamp and overflowed lands to be reclaimed, and the greater part of the remainder needs an artificial system of irrigation before the valleys can be brought up to their highest state of productiveness. It does not require to be demonstrated that farmers will not undertake tillage in a country where the chance is very uncertain that the gathering in of grain will follow the sowing. Sensible, thrifty men will hardly take shares in a lottery where the blanks are about equal to the prizes. For this reason, although the San Joaquin valley has been open for settlement more than twenty years, and is as fine a body of land as can be found in the world for the growth of cereals, it is still very sparsely settled, and much of it entirely unoccupied.

In 1868 there was quite an influx of immigration to this valley. But the three succeeding years were dry; the rain-fall was quite insufficient, and there was an almost, and over much of the valley a complete, failure of crops, insomuch that there was in many cases absolute suffering for want of food. Sheep and cattle were driven off and sold for whatever could be obtained for them, in order to save them from death by starvation. The result was that a large proportion of the immigrants left the valley and sought places where, as they said, "it rained sometimes." Multitudes went to Oregon.

The rain-fall in Stockton averages twenty inches. Further south it is considerably less, and, of course, is not sufficient to secure crops of cereals. In the years just

mentioned it was scarcely the half of the usual amount. Occasionally there is a year when the rain-fall is sufficient to show the wonderful capacity for production which the soil possesses when the conditions are favorable. The year 1872 was such an exception. In that season there were twenty millions of bushels of wheat produced in these two valleys, with less than a fourth part of the land under cultivation, and much of that cultivation of the rudest and most superficial character. Although wheat was the principal crop, there were many other valuable products raised in large quantities.

From the fraction of the San Joaquin valley that was cultivated twelve millions of dollars' worth of wheat was taken, equal in value to more than half the product of all the mines in the State for the twelvemonth, while the number of producers in the case of the wheat was not equal to a tithe of those employed in getting the gold.

A writer says: "Nature or nature's God has done ninety-nine parts toward making these valleys one of the richest agricultural districts in the world; can man supply the small remaining fraction?"

Upon examination, it appears that every facility has been provided for doing what little remains to be done. The valley of the San Joaquin declines toward the center, and on the eastern side there come down from the Sierra Nevada mountains innumerable streams, several of which are large, fine rivers. On the western side there are few rivers, and none of any magnitude. In the extreme southern part of the valley there are three lakes, one of which, the Tulare, is a large body of water, covering an area of seven hundred square miles. Investigation has led to the

discovery that this lake is two hundred feet above the sea-level, and that there is a gradual descent from it all the way through the valley to San Pablo bay.

The question, can these rich lands, for which nature has done so much, be irrigated in such a way and at such an expense as to make crops certain and profitable, becomes, therefore, an easy one to answer.

One of the advantages of living so far down in the ages is, that we have secured to us the chance of learning from the experience of those who have gone before us. Empiricism is not a necessity in all directions. In this matter of artificial irrigation experience has been ample, and the testimony that can be made available is abundant. Systems of irrigation have existed as far back as the authentic history of man extends. There were canals in Egypt for irrigating purposes before the pyramids were built. In China, canals and ditches for this purpose were common long before the time of Confucius. On our own continent, apparatus for irrigation was in use before the incoming of European population. When Cortez conquered Mexico he found arrangements that had been made, at a great expense of labor and money, for supplementing the rain-fall. There is abundant reason to believe that Arizona, dry and barren as it is, and barren because dry, was once a flourishing agricultural region, with hundreds of miles of irrigating canals and ditches, and a population numerous enough to build large cities and towns. Even the Colorado desert, that most arid of all wastes, the worst part of which is comprised by the delta between the Gila and the Colorado rivers, was not always the forlorn and miserable place it is at present, and there is a fair promise that it will remain

as it is no longer when the means for its irrigation are made feasible. These statements are taken from a report made by Mr. J. Ross Browne, who claims that he has personal observation for his authority.

Northern Italy owes its fertility and populousness to artificial irrigation. There are twelve hundred miles of canals in Piedmont, and four thousand five hundred in Lombardy. It is an interesting fact that the increase of population has been fifty per cent. greater in the irrigated district of Piedmont than in the non-irrigated. Districts that were formerly desert wastes are now populous and productive.

But in China, where the density of the population makes it needful to make the most of all possible resources, artificial irrigation has been carried to the greatest extent. The great plain of China, which has an area of two hundred and ten thousand square miles, is a vast network of rivers, canals and ditches.

There is also a vast and complete system of artificial irrigation in India. "The Ganges canal is, perhaps, the largest work of the kind in the world. Its full capacity is six thousand five hundred cubic feet of water a second; the width of the bed is one hundred and sixty-four feet, and the depth ten feet. The main channel is three hundred and forty miles in length, and navigable throughout; the branches are three hundred and sixty miles aggregate length, and the distributaries three thousand seventy-one miles. A carriage road is kept up on all the main and branch canals, and the banks are planted with trees."

These facts show what has been done in the old world, and the feasibility of meeting the needs of the case in the

new. It remains to be seen what steps have already been taken, and what plans have been projected for doing what is so evidently necessary for the prosperity of the State.

Men of enterprise and capital, most of whom are residents of San Francisco, formed a joint-stock company, which was incorporated by act of legislature in September, 1871, under the name and title of "The San Joaquin King's River Canal and Irrigation Company." The capital amounted to ten million dollars, which was divided into one hundred thousand shares at one hundred dollars each.

"The objects are, the construction of a system of canals in the Great San Joaquin and Sacramento valleys in the State of California, leading from the San Joaquin river, the King's river and their tributaries, also from the Tulare lake, the Kern and Buena Vista lakes, and waters flowing thereinto, for the transportation of passengers and freight, and for the purpose of irrigation and water power, and also the supplying of cities and towns in the State of California with fresh water for domestic purposes; also the buying and selling of lands and real estate. This company's charter is to exist for fifty years. The preliminary objects of the company are the construction of main canals through Kern, Tulare, Fresno, Merced, Stanislaus, San Joaquin, Contra Costa and Alameda counties, leading from the above mentioned lakes and rivers, for irrigating portions of said counties, and for affording navigation the year round from Kern lake to tide-water near Antioch, a distance of three hundred miles."

The sources of supply are from the Sierra Nevada mountains, where the melting of snow during the spring

SENTINEL ROCK. PAGE 221.

and summer months keeps the rivers full at a time when water is most required for the land.

Tulare lake, at its lowest stage of water, is rather over two hundred feet above the sea-level, and covers an area of seven hundred square miles. Six feet of water drawn off its surface would suffice to irrigate five millions of acres of grain and cotton. The average depth of the lake is from twenty-five to thirty-five feet. There are no mountains or hills intervening along the course of the proposed main canal and the bay at Antioch.

The fall of the valley between the lake and tide-water at Antioch is about fourteen inches to the mile; and from the foot-hills of the Monte Diablo range of mountains, which bound its west side, to the San Joaquin river, the transverse fall of the valley is from six to twenty feet to the mile, so that the drainage is naturally perfect, and no swamps and malaria can be created by its proper irrigation.

The soil is of a rich brown loam along the west side of the valley, and a sandy, rich loam on the east side. On the west side wells have been sunk over one hundred feet in depth through pure alluvial soil without any rock or gravel.

The surface of the ground generally along the west side of the valley is remarkably even, and unusually free from rivers and water-courses, so the cost of construction will be comparatively light.

The main canal from the lake to Antioch will have a discharge of fifteen hundred cubic feet per second, and be capable of carrying a depth of ten feet of water, with a width of one hundred feet. The length of this canal will

be one hundred and eighty miles. The company's charge for water to the actual settler on each legal subdivision of the public land is one dollar and fifty cents per acre per crop of grain, cotton or grass.

On the east side of the valley the numerous streams which have their sources in the Sierra Nevada mountains come down well filled, and best filled when most water is needed, for the hot summer sun, which dries the surface in the valley, melts the snow that is stored away in the mountains.

The value of these canals will be much enhanced and their profitableness increased by the fact that they can be used for transportation. The advantage of water over land carriage on the score of cheapness is recognized the world over; and in these days of railroad monopolies and high tariffs, that advantage will have greater appreciation.

It is a somewhat startling fact that in the State of New York, with its multiplicity of railroads and comparatively low charges, in the year 1871–2 nearly one-third of the entire tonnage which passed through the State going from the west to the east passed over the Erie canal, which in the minds of many has become almost a thing of the past, so much more noise is made by the railroads!

A less amount of interest and energy in creating facilities for irrigation than have already been expended in building flumes and constructing ditches for mining purposes in California would convert these great valleys into one of the finest agricultural regions in the world. Crops would then be certain, and when the husbandman sowed he might be sure that in due time he would reap and gather in his harvests.

It will perhaps be a matter of surprise to those who have not looked into the matter, to know that the aggregate extent of mining ditches and canals built in California since 1851 reaches the extraordinary figure of five thousand three hundred and twenty-eight miles! And they have been built at a cost of fifteen million five thousand four hundred dollars! Some of these ditches cost from five hundred to one million dollars.

CHAPTER VII.

RECLAMATION.

NOT only are these vast quantities of land to be irrigated in order to bring them up to their highest producing capacity, but there are also three millions of acres from which the water is to be drained before it can be used for agricultural purposes. This land consists in part of marsh land contiguous to the bay and its estuaries, and in part of tule lands which border the San Joaquin and Sacramento rivers, and extend through a considerable part of both valleys, forming a strip varying in width at a greater or less distance from the river.

During the last three years much has been done toward reclaiming both classes of lands. The success attending these efforts has been very gratifying. The islands in the bays of Suisun and San Pablo, and the delta formed at the junction of the Sacramento and San Joaquin rivers, have been reclaimed or are now in process of reclamation. This process consists simply in raising a levee or dyke high enough to exclude the water, and, when the marsh is salt, in freshening it by letting it lie till the rains have washed out the salt. This operation may be quickened by flooding the land with fresh water from artesian wells, or any other source available. It has been found that the second year after they have been reclaimed these lands will produce alfalfa, and the third year abundant crops of grain.

The yield of these moist lands in alfalfa, timothy and the various grasses is enormous. Five tons to the acre is considered an average crop, while as high as eight tons in a single year is not uncommon. At fifteen dollars per ton a very handsome profit can be made.

On Sherman Island some of the lands cultivated in wheat yielded a profit of not less than thirty dollars to the acre, while the average was twenty-five dollars. According to official reports, eighty bushels of wheat to the acre have been raised on some of these reclaimed lands. Sherman Island, which lies in the bight of the delta formed by the Sacramento and San Joaquin rivers just as they enter Suisun bay, has an area of sixteen thousand acres. It has been reclaimed by building a dyke entirely around it. The investment has been found to be a very profitable one. Two crops even of potatoes can be raised in a season with large results each time. The owner of a farm on the island sent to New York for three barrels of early rose potatoes, which had not then found their way to California. By the time the potatoes reached him they had cost an extravagantly high price. They were planted in January, and in June were ripe and ready for digging. The farmer let them remain out of the ground until August, when he planted the entire yield of the first crop. He had another prolific yield, which he sold at such rates as to give him the largest percentage on the original investment that any capital had ever returned to him.

Besides these swamp lands which Holland and other countries have in common with California, there is another class of lands which is peculiarly a Californian possession. These are the tule lands, so called from the only product of

the soil — the tule (pronounced in two syllables). The tule is a species of bulrush, and judging from the size it must be the great father of all the bulrushes. It grows from six to ten feet high; occasionally one more enterprising than its compeers attaining the altitude of ten feet. The tule is straight as an arrow, and without joints or leaves or any appendage except upon the very summit, which is crowned with a head not unlike that upon the sorghum, only upon a reduced scale. These tules grow so luxuriantly and thickly on the rich, swampy land that neither man nor beast can make a way through them; they must be trodden down and made into a sort of pontoon bridge and walked over. During the fall or early winter they are often burned. The fires made by the burning tules can be seen miles away, looking not unlike the fires on the prairies, except that the volume of smoke is greater and of a more tartarean color. Woe to the laundress whose clothes are on the line out-of-doors when the tules are on fire anywhere within a radius of ten miles! The soot comes down in large flakes, which sometimes so fill the air as to resemble a snow-storm, with the difference that each particular flake seems to have been dyed in an ink-bottle. There is a belt of these tule lands reaching all the way from Kern lake to the Upper Sacramento. These, like the swamp lands, are wonderfully productive when reclaimed. The soil is frequently eighteen or twenty feet deep, and made up of a compound of matted roots and decayed tules. These are so thoroughly decomposed below the surface of the living fiber, that cultivation, even the first year, is not difficult. It is safe to calculate upon at least one-third

more product from these reclaimed tule lands than from the best valley lands.

It will be readily seen that the reclamation of these lands, whether swamp or tule, will be of little avail without a system of irrigation which shall include and cover them. The nature of the soil will make irrigation an absolute necessity.

CHAPTER VIII.

NORTHERN CALIFORNIA.

THIS part of the State is well entitled to more attention than it has received. The law of compensation which is found to prevail almost everywhere in this world is not inoperative here. In some respects northern California has the advantage over any other part of the State. In the first place there is not the same or an equal deficiency in the rain-fall, which in some places is double that in San Francisco, and is more equally divided in the times of falling. In addition to the reason assigned for a greater rain-fall in a previous chapter, there is a local cause which coöperates with the general one, at least in the counties bordering on the coast, namely, the prevalence of redwood forests, which have a remarkable power to arrest moisture and condense it into rain. These redwoods *(Sequoia sempervirens)* belong exclusively to the Coast Range mountains. Two conditions seem to be essential to their growth — the foggy regions peculiar to the Coast Range, and an underlying basis of metamorphic sandstone. They are not found where these conditions do not co-exist. From the northern part of the State down to Tomales bay, in Marin county, they form a continuous forest, increasing in width northward. The redwood, though less in extent than its half-brother, the *Sequoia gigantea*, or big-tree, has greater commercial value; indeed, in this respect it stands at the head of the list of California trees. A red-

wood tree twenty-five feet in diameter contains forty thousand cubic feet, and weighs two million five hundred thousand pounds. The shingles made from a single tree will load a schooner, and it is recorded that a man, after building his house and barn out of the lumber of one individual tree, had enough timber left to fence a garden containing two acres of land!

These trees grow to a height but little less than that attained by the other species of *Sequoia*. They grow two hundred and even two hundred and fifty feet high. The foliage is less like that of the cedar, and more like the hemlock, than is that of the big-tree. In those counties in northern California which border upon the sea, sawmills are numerous, and the lumber-trade the absorbing interest. Humboldt bay, in the county of the same name, is the great center of this business. This bay, which is two hundred and twenty-three miles north of San Francisco, is the best harbor found between Puget Sound and the Golden Gate. "It is formed by two densely timbered peninsulas, which inclose a very handsome bay about twelve miles in length, and from two to five miles in width, its shores thickly timbered with magnificent pine and redwood to the water's edge. The entrance to this bay is about one-quarter of a mile wide, with eighteen feet of water at low tide."

Of these northern counties Humboldt is on many accounts the most attractive. It has a fine harbor, and the only one in northern California. Some of the finest redwood forests in the State are found here. It has water privileges, abundant and good, on the river of the same name, which runs across it. There is unused power suffi-

cient to turn any quantity of machinery. It has good grazing lands in abundance, which make wool-growing very profitable. There is scarcely a doubt that sheep will do better here than in any part of southern California. But, as an offset to these advantages, and to bring things nearer to an equilibrium, Shasta and Siskiyou will soon have a railroad running through them from south to north. The California and Oregon railroad is now finished and in running order to Fort Redding, in the southern part of Shasta county, and the parties who have it in hand are hurrying it on to completion. And where the railroad goes, there go, in its company, all the appliances of civilization. Locomotives and tenders ought to be reckoned among the tools for missionary operations; for they equalize the conditions of countries; they carry peoples and ideas, and scatter light wherever they go. Brigham Young set the seal to the destruction of the "peculiar institution" among the Mormons when he adopted measures for making a railway to connect Salt Lake City with the remainder of the world.

And yet there comes a doubt whether those who are whisked through northern California and Oregon by the iron horse will see as much beauty and enjoy as much as a certain person did who came through in a poor, uncomfortable mud-wagon, or a series of them, with four horses for locomotive power!

This ride was a part of an overland journey from Portland, and was made in the season of the year when the country looked its best, being arrayed in its autumnal garments. Enough rain had fallen to lay the dust effectually, and even convert it into mud in many places. The

deciduous trees had put on their yellow and brown and russet attire — a thing which they never do further south. The air was pure and exhilarating, as it always is after the rains begin. The day on which the journey was made down the great Sacramento cañon stands out in the memory as one of the whitest of white days. In all the many hundred miles of travel on the Pacific coast there was nothing like that! — no day the glory of which was equal to the glory of that, unless a day on the upper Columbia should be excepted. Let no traveler think that he has really seen California, and knows what it can furnish in the way of scenery, till he has followed the Sacramento river from its beginning near Mount Shasta down as far at least as Red Bluff, where it begins to be so much like other rivers — so orderly and manageable that it becomes navigable.

The Siskiyou mountains form the dividing line between Oregon and California part of the way. Soon after crossing these mountains we came to the pillar of stone, set up to show where Oregon ends and California begins. Before long we crossed the Klamath river, and then the Shasta, and were soon at Yreka, which is the northernmost town in the State. The name is not a corruption of the well-known Eureka of the old Greek, as might be supposed from its resemblance, but is the name of a tribe of Indians who formerly lived hereabouts. The town is situated on a plateau four thousand feet above the level of the sea, and is the center of quite a large trade, being the place of interchange between miners and those who furnish their supplies.

Within the last few months this town has come into notice as being the base of operations in the war carried on

for six months or more between the United States, with their immense military and every other kind of power, and about two-score half-starved and half-clothed Modocs, who made the lava-beds, not very far away, their high tower and place of refuge. We are now furnished with a new clause to our climax for Fourth of July use. We have conquered the British, the Southern rebels, and — the Modocs!

Poetic justice would seem to require that a hero who with a handful of followers could keep a great nation, with all its resources, at bay for so long should have other reward meted out to him than to be strangled with a halter!

One of the unpleasant things about the stage ride was the necessity of traveling by night. As but one stage started from Portland in the twenty-four hours, and the driving was continuous, there was no escape from night travel. Stopping by the way necessitated a twenty-four hours' delay, and the starting again at the same hour at which the stopping occurred. Hence it came about, "total depravity" being inherent in inanimate things as well as some animate, that the very places and things, the sight of which was most desired, were almost sure to occur when they had to be passed in the night.

In consonance with this fact, the nearest point to Mount Shasta was passed in the darkness of the night, at which time we went within seven miles of its base. This mountain is the crowning glory of the mountain system in northern California. It is the memento put up to show the place where the two mountain ranges, that have been approaching so long, at last effect their union. Mount

Shasta is fourteen thousand four hundred and forty feet high. Until recently it was supposed to be the highest peak in the whole Sierra Nevada range, but late measurements prove that Mount Whitney and other peaks in the southern part of the State outrank it. But it is doubtful whether any of them excel it in symmetry of outline and beauty of aspect. During the weeks that I was in Vancouver, always beholding the beauty of Mount Hood, it did not seem that any other mountain could surpass, if, indeed, any could equal it. But, like the unfortunate wight who could be very happy with either were "t'other dear charmer away," as often as I saw Mount Shasta I was divided in my allegiance. During the three or four months that I had previously spent in the Upper Sacramento valley one of my great delights was watching this mountain and seeing it in all its different aspects. When the sun was scorching everything, as it has a way of doing in that part of the valley, it was very refreshing to look up to this peak, which, with its white garments reaching away down as far as the eye could see, had so cool and quiet and placid an appearance. It seemed like a saint that is lifted above the strife and conflict of the world by a serene faith in the high and the pure. Although the mountain was more than one hundred miles from where I was, so pure was the atmosphere that it seemed quite near — so near that it would have been easy to believe it could be reached by an afternoon's ride. Looking at it from afar so long had created an intense desire for a more intimate acquaintance. Yet this chance must be lost, because we were to pass the nearest point in the night. As there was no help for this and no change

possible, the best thing that could be done in the circumstances was decided upon. The lower soda springs were only fifteen or twenty miles from the base of the mountain, so a stop was made there, in order that a whole day could be spent in viewing and admiring this snow-capped mountain.

But here again this same "total depravity" of things inanimate worked my loss. Waiting and watching all the livelong day, not one glimpse of the mountain was vouchsafed to my longing eyes — not the most indistinct vision of the outline. An uncomfortable drizzle, which was neither a good honest rain nor an ethereal mist that could be looked through, covered and concealed everything. It was an impenetrable veil that was as effectual in obscuring all surrounding objects as the darkness of night could possibly be. For such a misfortune there was no remedy within the reach of human might. So I turned from the impossible to the possible, and tried to find out what I could about the soda springs.

There are several in the immediate vicinity, differing from one another in the kind and degree of impregnation. Soda enters so largely into the combination in one spring that the water is used instead of yeast or baking-powder in the manufacture of bread. Flour mixed with it rises quickly and nicely. Some miners, who were digging for gold not very far away, had their cabin near this spring on account of the convenience of having this water with which to mix their bread. In one of the springs the water is so strongly impregnated with the alkali that if used unadulterated it gives the bread the yellowish-green look so well known to cooks as indicating too

generous a use of soda. The water of the spring most used for medicinal purposes is very pleasant to the taste, unlike most mineral waters. There is a little acidity in the flavor and a sparkle and freshness that makes it very acceptable. The proprietor of the springs is a regular Pike. He came from Missouri some twenty years or more ago, and has lived here ever since. He is some forty-five years of age, and never saw a steamboat or a railroad in his life! It was refreshing to see a man so totally unsophisticated — so unknowing in regard to the ways of the world — one who belonged so thoroughly to a past age, and had so much to anticipate; for not many months will pass before the iron horse will be running past his door, and waking the echoes that have slept so long with its loud snort. The Sacramento river here begins its long journey. It is so small and insignificant that a man could almost leap across it.

We started from the springs in the early morning, just in time to watch the signs and the miracles that attend the birth of a new day. How wonderful the sight would be if repetition had not made it familiar! First, a faint light appeared, the hills flushed, then brightened; soon the disk of the sun came up, and object after object took upon itself outline and form; then darkness fled away and everything was revealed. A new day had come! A new day, and one that was perfect! There was no flaw anywhere in the sky or the air. This was some compensation for the disappointment of yesterday. Mount Shasta looked its best; it could not possibly have made any finer appearance. What a day's ride that was which thus begun!

We passed Castle rocks soon after starting. These rocks

are formed by a spur of Trinity mountain, and are on the right bank of the Sacramento. This range rises twenty-five hundred feet above the valley, and has a ragged crest of pinnacles and spires of a grayish color. In many places the rocks bear a striking resemblance to castles, as we see them pictured. Sometimes they looked in good repair, then again they seemed as though time's busy fingers had dismantled them, and dungeon, warden and keep, all were gone. It did not require much stretch of the imagination to suppose that there had been days when there were giants in the land and these magnificent castles were their dwelling-places. There were turrets, minarets, spires and belfries; nothing seemed to be wanting; and these walls and battlements were of such a height as no knight in the olden time, when knights were valiant and daring, ever scaled or captured.

The Sacramento river, for the first hundred miles of its course, is a very unruly stream, and refuses altogether to be navigated by anything. Sometimes it goes along quietly, between its high banks and under the shadow of great trees, as though it were nursing itself and gathering strength for some conflict soon to come; then it boils and bubbles and tosses and fusses among the rocks and obstructions that come in its way. Sometimes it is required of it to make its way through mountain passes, which it does fearlessly, leaving banks along the gorge that it makes one dizzy to look down from. Having performed a feat like this, it runs on for miles, making long elbows and many angles, as though it were not in the least bit of a hurry, but had plenty of time to play if it chose, or cut up any caper that chanced to come into its head. All the hill-sides

and mountains were covered with trees, the deciduous ones, not yet in "the sear and yellow leaf," but arrayed in those gorgeous dyes which they, as if preparing for their apotheosis, assume before their departure. There were enough evergreens among them to answer for a background, of which the deciduous trees were the foil and ornamentation. With every variety of surface, hill, dell, mountain and valley, abrupt peaks, shaggy and awful, gorges deep and mysterious, each change coming without preparation, and often without anything to give even the keynote to the approaching entertainment,—it was a day of gracious surprises and the most intense enjoyment. Then, in the distance was always Mount Shasta, grand and lonely, with its head and sides covered with snow away down as far as the eye could see. The clear sun shining upon it made it almost too glittering for the eye. Sometimes there were clouds resting midway between the top and the base, while the summit loomed up clear and bright above all the mists and obscurities.

When the day was waning and the light already so dim that surrounding objects were to some extent obscure, we came near to some high hills or mountains that were very striking in their appearance. They were white and destitute of vegetation. We saw them for a long time; for, in going through a cañon, in order to avoid going over them, the road made almost their entire circuit. Professor Whitney describes them as "the Gray mountains, sometimes called the Marble mountains, a range that stretches along the east end of the Cloud river. Some of the points are three thousand feet high." When the railroad reaches them, and transportation becomes possible,

these mountains, or considerable parts of them, will probably go to San Francisco, to make marble fronts for banks and up-town residences, where millionaires will hold their courts and keep Chinese boarding-houses in their kitchens!

Darkness covered the land before we came to Pitt river, which we crossed in a ferry-boat. This stream rises on the east of the Sierra Nevada mountains, coming out of the southern end of Goose lake with quite a parade of noise and confusion. It has enough force, by the time it gets to them, to make its way through the mountains, and then flows in a southeast direction till it unites with the Sacramento, to which it not only gives itself, but, woman-like, its name also, although much the larger river of the two, imitating, in this respect, the illustrious example of the Missouri, which yields its title and its individuality to the lesser Mississippi. We crossed the Pitt river not far from its junction with the Sacramento. Although not very wide, it is said to be absolutely unfathomable. With a courageous moon, that was full and evidently determined to do its best to make up for the absence of the sun, our ride continued to be pleasant far into the night. A soft glamour was cast over everything; outlines were revealed, and the imagination allowed to fill in as it chose. The country is such as is generally found skirting the Sierra Nevada mountains. It is but little broken, and much of it is entirely level, with grand old oaks scattered here and there, as though nature had undertaken to show what was the highest type of a landscape garden.

The road was smooth and good, and we traveled on without let or hindrance. The only decided sensation experienced was when we drew near to a spot about twenty

miles north of Red Bluff, where the stage had been robbed thrice within a short time. It is a point where the road from Shasta comes into the one on which we were traveling, and the gold brought over both routes is put into the same coach. The robbers had, in all three cases, been careful of the feelings and convenience of the white passengers, and had not molested them, being satisfied with taking the express-boxes and relieving the Chinamen, when there were any, of their surplus capital. But it was not certain that such a state of mind was immutable among the robbers, and it was not quite pleasant to be at the mercy of the whims and oddities of men so lawless and irresponsible. However, being by a chronic fatality a member of that class of travelers who are proverbially easy *coram latronibus*, the quiet of the occasion was not greatly disturbed, at least in the case of the individual whose welfare was nearest the heart of the writer. The dangerous place was passed in safety, and at three o'clock in the morning we drew up at the Tremont House in Red Bluff.

Our stage-ride was over; the railroad was now at our service. That there was fatigue connected with the ride was beyond dispute, but there had been ample compensation for all unpleasantness in the increased acquaintance with the country and the enjoyment in seeing much that was strange and beautiful.

Mount Shasta deserves a fuller description. Standing as it does, with its head not much less than three miles above the valley in which it is situated, it looks even higher than it is because of its isolation. There is no other peak near; it stands solitary and alone, the crowned "monarch of all it surveys." The ascent of the mount-

ain is difficult, but not hazardous. At the base the mountain is covered with trees, which continue to grow until the altitude of from four to seven thousand feet is reached. Some of these trees are immense pines six feet in diameter and two hundred feet high. The sugar pine is the grandest of them all. After reaching the height of eight thousand feet these large trees gradually disappear, but there is a species of pine that continues to grow for still another thousand feet. After that there are no signs of vegetation except the red snow.

Quite recently a weather-signal has been erected on the summit of the mountain, under the direction of the Federal Coast Survey.

CHAPTER IX.

A RANCH IN THE UPPER SACRAMENTO VALLEY.

DESCENDING from generals to particulars sometimes clears our ideas. The mind interests itself more readily in and takes more kindly to an individual than a species. Instead, therefore, of a general description of the Upper Sacramento valley, a particular account of a ranch will be given. As the writer spent three or four months upon a certain one, there was opportunity to become thoroughly acquainted with the minutiæ of its management. These California ranches, consisting, as they often do, of many thousands of acres, are conducted on a scale of magnificence that would quite astonish practical farmers in other parts of the country.

The word ranch is a memento of the early Spanish occupancy. There are many of these reminders all over the land. The names of mountains, towns and rivers are frequently derived from the same language. Oftentimes they are corrupted by English use, as is the case of this one, which is a hybrid, but, as such, current everywhere, together with its derivatives. Farm-hands are called ranchmen. A man is ranching horses when he takes them to pasture.

The ranch in question is located in the Sacramento valley, near Red Bluff, which is at the head of navigation on the Sacramento. It is in Tehama county, on the east side of the river. The ranch was originally a Spanish

grant, but had passed through two or three hands before coming into the possession of the present owner. It contains sixteen thousand acres, in all of which there is scarcely a rod of waste land. The valley here, as elsewhere, reaches from mountain range to mountain range — from the Sierra Nevada on the east to the Coast Range on the west, and is at this point from thirty to forty miles wide. Both ranges of mountains can be clearly seen in the winter and early spring, when the atmosphere, purified by the rains, is transparent, reaching up their snow-capped heads to the skies, making it oftentimes difficult to tell where the mountain leaves off and the heavens begin. As the season advances the snow melts from all the peaks except Lassen's Butte and Mount Shasta. This last mountain is the loftiest in the northern part of the State, being over fourteen thousand feet in height. Although it is more than one hundred miles north of Red Bluff, looking at it through the clear atmosphere it seems to be a near neighbor, and it would be easy to believe that a pleasant morning-ride would take one to it. It is a grand and refreshing sight on a summer's day to view its cool and quiet demeanor as it looms up in the distance, clad in purest white away down as far as the eye can see, its head serenely lifted above the heat and dust that oppress and envelop all below it. "Like a great rock in a weary land," it seems to invite all to come and take refuge beneath its shadow.

There exists in this locality a peculiarity which is often observable among the foot-hills of the Sierra Nevada mountains. The land is neither timber-land nor prairie, but is park-like, there being scattered here and there

the grandest oaks that ever delighted the eye or made glad the heart. They have the graceful sweep of the New England elm and the magnificent size that the rich soil of California enables them to attain. There is now and then a live-oak to be seen among them, as if to make a little variety. The trees are not so thick as to be serious *impedimenta* in the cultivation of the soil, which is often carried on without felling them. There seems to be good reason for the opinion that this whole Sacramento valley was once a vast lake, inclosed between the two ranges of mountains. Some great convulsion, of which there was no witness, or at least none remaining to tell the tale, opened the Golden Gate in the Coast Range and let the waters flow out until none remained except in the more depressed parts, and then there remained but the valley and the river.

The ranch extends about four miles along the river. The abundance of water which it possesses is one of its best peculiarities. There is not a field in the whole ranch through which there does not run a living stream. These rivulets come down from the mountains through cañons in the foot-hills, growing in size as they run along till they get to the valley, when they wind about here and there gladdening the earth and giving drink to the thirsty cattle as they, rejoicing, go on their way to seek the river. There is a flouring-mill of large capacity on the ranch, the wheels of which are kept running by a never-failing supply of water furnished by one of these streams.

Between three and four thousand acres are sown with wheat and barley. The machinery used in harvesting the grain works so fast that twelve hundred bushels of wheat,

that in the morning hold their golden heads erect in the field, in the evening find themselves tied up in sacks ready for the mill.

The grain is cut with "headers," which are driven through the field, and cut the stalks about six inches below the head. Each header is accompanied with a train of three header wagons. The wagon is built with one low side, and is driven along with this side so close to the header that the grain is thrown into it as fast as it is cut. When one wagon is filled another is driven up, which in turn gives place to another, and so on in perpetual rotation. These header wagons take the grain directly to the steam thresher, which is driven about to convenient places in the field. The whole process of threshing, cleaning, etc., is gone through with on the spot, and the grain is at once put into sacks. The wheat is so dry that no process or delay is required to prepare it for the market. Being put into sacks, it is left on the field a month or more if need be, until it is entirely convenient to make some other disposition of it. There is no danger of a sudden shower to occasion hurry in getting in the grain. There is no fear of rain before the farmers' eyes all through the summer months. Monsieur "Probs" would have an easy berth of it in that region. The sky never leaks in harvest time. Fifty acres per diem is the average amount cut through the entire season of harvest. To carry on these operations a force of forty horses and about thirty men is required.

The process of putting in the grain is managed as follows. Plowing is commenced as soon as the rain begins to fall. This does not occur until late in November, or oftener in December. Fifty horses or mules and about

EL CAPITAN. (3.300 FEET HIGH.)

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twenty men are employed from that time until March, clearing the fields, plowing, sowing, harrowing and going through with the various processes connected with planting. All of the machinery and implements are of the best. The old-fashioned plow, that a man was compelled to hold fast with both hands in order to make it "toe the mark," is altogether discarded in this enterprising and progressive country. No plow is used that does not at least cut two furrows, and many cut three. Buggy and sulky plows, in which a man may ride in a very gentlemanly way, are in use, and they often cost one hundred dollars. From four to six, and sometimes even eight, horses or mules are attached to each. When a half-dozen of these teams are driven in at noon or night, and released from harness, they easily suggest the disbanding of a small army. The plowing does not always cease with the putting in of the grain. Hundreds of acres are plowed so as to be ready for sowing before the fall rains begin. This is called "summer fallowing," and is the surest way to secure a good crop. These fields are "cultivated in;" that is, the grain is put in with a cultivator, which can be done at any time during the summer or fall, when convenience makes it desirable; for nothing will harm the grain while it lies on the ground. It stays there, safe and sound, waiting for the rain that will come in the late autumn and make it spring up. It will then have the whole period of the rains in which to grow, and by the time they are over it is too far advanced toward maturity to be harmed by their discontinuance. As the rains sometimes delay their coming until late in December, where so much ground is to be plowed, it is difficult to plant all the grain in the ordinary way in

time for it to pass beyond the danger from drought before the rains cease. Oftentimes a field is "cultivated in" after harvest, without replowing, and a very good crop secured.

Labor is expensive. Men receive thirty dollars per month and board for ordinary service. In haying and harvest time there is an advance upon this price of from fifty to one hundred per cent. At these prices men are plentiful, though they are not the best specimens of the article. Many of them are men who have been worth their thousands of dollars, made in the mines; but by some move of the capricious goddess their dollars have vanished, and they are compelled to work for their daily bread. "Jail-birds," too, not unfrequently light upon the ranch and remain stationary for awhile.

The supply of laborers is generally quite equal to the demand, and sometimes considerably exceeds it. No arrangements are made for lodging them. Each one furnishes himself with a pair of blankets, which he carries about with him, and he has a wide range for selecting a place where he will spread them and lie down to his rest. The barn, the tool-house, the blacksmith shop, the granary, are all open to him, and he can decide where to choose at his leisure. If none of these places suit him, he can lie down under the spreading branches of an oak and have the sky for his coverlet.

On this ranch the men have their quarters in a house at a little distance from that of their employer, where a Chinaman, hired for the purpose, prepares and dispenses meat and drink. Five hundred tons of hay are cut in a season. This hay is not timothy or clover, but wild oats, which grow luxuriantly in all the region. No preparation of the field is

necessary, no plowing, no sowing; the oats grow of their own accord, and ask no pay for doing so. Even though a field may have been tilled for years, if it is left vacant for a season, instead of growing up to weeds and briars, as is the naughty fashion in less favored lands, wild oats, which seem to have been lying in wait all the time, are ready to spring up and offer a fine harvest of hay of the best quality. The oats are cut before the grain is ripe enough to shell out in handling. Before the country was settled and the land brought under cultivation these wild oats grew everywhere very luxuriantly, thus furnishing such pasture for sheep and cattle as is not often found.

Six hundred head of cattle board themselves on the broad acres in parts of the ranch not under cultivation. These cattle require no attention in summer or winter, except that two men, called vacqueros, a Spanish word meaning herdsman, are employed to ride around and see that they, in common with the hogs and horses, behave themselves with a due regard to propriety; that they throw down no fences and break into no fields. There are between forty and fifty miles of fence on the ranch.

Twelve hundred hogs find themselves subject to the inexorable law, "Root, hog, or — die!" They are most ungainly, villainous-looking creatures. They have not the fear of man nor any other fear before their eyes. They have evidently come from ancestors that were accustomed to look out for number one. They abound in that valuable quality, self-reliance, which makes them desirable. The smooth, unctious, aristocratic-looking Chester whites are not tolerated on the ranch. They were tried and found wanting in the tact and energy needful for digging soap-

root and other esculents hidden in the ground, as well as in a general understanding of the ways and means of taking care of themselves. These hogs are driven in from the fields and slaughtered for the market without any preliminary feeding by way of preparation. They are brought from their range in the green fields, and without warning hurried to their fate.

Fourteen thousand sheep, under the care of shepherds, crop the grass at their leisure, and at no season of the year require shelter or feeding. There is a shepherd for each two thousand sheep. He keeps an eye on them during the day to see that they do not wander away, and at night gathers them into a corral, or some protected place, near which he sleeps in a tent or cabin. These sheep are not expected to be all pastured on the ranch. A part are kept on unoccupied lands, and in the summer, when the pastures wither and dry up for want of rain, they are driven to the mountains, where they are watched and cared for by the shepherds.

Sheep-growing is a very profitable business in this region. The increase is very rapid; from eighty to one hundred per cent. per annum being safely calculated upon, with good care. With wool at present prices sheep easily net two dollars per head. In this part of the State it is customary to shear twice in the year; the first time in April, the second in August. The fall clip averages from half to two-thirds as much as the spring.

No kind of animal is ever sheltered or fed except the working horses. These are kept on barley and hay. Between three and four thousand bushels of barley are fed in a season. No Indian corn is raised, except for table use,

and that is irrigated, as indeed all the garden and orchard must be. The rains cease too early for these products to be matured without artificial irrigation. No potatoes are raised; the supply is bought in Red Bluff, and is generally brought thither from Oregon. Although so many cattle roam over the pastures, not a pound of butter is made on the ranch; that, also, is bought in Red Bluff. A single cow furnishes milk for family use. By so much is this household better off than many others, for oftentimes, while hundreds of cattle are raised and kept on the ranch, coffee and tea are drunk unblessed with cream.

The winters are very pleasant. Although there is more rain than farther south, there are many days, and sometimes even weeks, in succession when there is but little or none, when the sky is clear, the sun bright, and the air pure and exhilarating. But in summer the heat is intense. The mercury goes up to 112°, 115°, and even to 118° and 120° in the shade. The women and children, and all that can, migrate to cooler regions. Many persons have summer-houses in the mountains, twenty or thirty miles away, to which they flee for comfort and safety. Others go to "the bay," as they always say in speaking of San Francisco, and remain there through the two or three hottest months. The intense heat and luxuriant vegetation have the effect to produce malaria, which generates chills and fevers. These ailments are not at all uncommon in this region.

CHAPTER X.

A FRUIT RANCH ON THE SACRAMENTO RIVER.

THE fruit of California is now known of all men, and women too, at least in our own country; but all do not know it in its best estate. Most varieties are not improved by age. To appreciate its delicate flavors and sweet lusciousness, it must be eaten where it grows, and tasted not long after it has left its parent stem.

It was my good fortune to spend several weeks upon a ranch that is esteemed one of the best in the State for fruit-growing. I thought myself happy to be there, not once only, but thrice at different seasons of the year, and have therefore had a chance to make myself thoroughly acquainted with the various operations by which such a ranch is carried on.

One of these visits occurred in the delectable season of the vintage. Shall I ever forget those delicious black Hamburg grapes? The white muscats commend themselves to the taste of many, and gain their preference; but as for me, give me Hamburgers, black, juicy and rich, and I will let who will have the others. The only fault I have to find with them is, they tempt too strongly to over-indulgence.

The ranch in question is situated on the Sacramento river, about a score of miles below the renowned city of that name. The land lying along the river between Sacramento and San Francisco is considered as good as any

in the State for fruit-raising, and is principally devoted to that purpose. The river affects the soil for about forty rods back from the bank, so that to that extent the fruit never fails from want of moisture. On the east side of the stream a levee protects the country from the overflow of its waters, from which there was formerly so much inconvenience and loss.

San Francisco is the market for the fruit, as well as all the other products of these ranches. Nothing is ever carried to Sacramento, though so near.

The large boats that ply between that place and San Francisco make but few landings, and do scarcely any of the way business. Two small sized steamers come up and go down on alternate days, and do a sort of general carrying trade. They go from ranch to ranch gathering up the baskets and boxes filled with fruit, and leaving the empty ones that are sent back by the consignees. Crossing the river diagonally is about all the headway gained sometimes for miles. As many as five thousand packages are handled by the men on these boats during a single trip, and the average number is about three thousand.

Apples, pears and grapes are shipped in boxes; most other kinds of fruit are sent in baskets. In this shape they are consigned to dealers in San Francisco, who, of course, have a percentage on the sales. The baskets and boxes are returned when emptied, as a general rule. Sometimes, in exceptional cases, the fruit is sold in and with that which contains it.

The ranch which is the subject of this writing was bought some fifteen years ago by the present owner at a cost of fifty-five hundred dollars. It was at the time of

purchase partially cultivated, and had beginnings of a fruit orchard upon it. It contains one section of land—six hundred and forty acres. The entire river frontage, about sixty acres, is in fruit. Of this, fifteen acres are in grapes and seven in pears; the remainder is divided between apples, apricots, cherries, plums, peaches and figs. The annual income of the ranch for the last few years has been from eight to twelve thousand dollars clear of all expenses.

Pears are the first fruit sent to market. These are dispatched the last of May, and those sent earliest command large prices, sometimes reaching as high as twelve cents per pound. The Madeline pear is the earliest; it is a very poor excuse for a pear, and later in the season would not sell at any price. A box of pears contains forty pounds. About two thousand boxes of this fruit are sent to market in a season, which bring an average price of one dollar and seventy-five cents per box. One hundred and fifty baskets of plums are sold at one dollar per basket. One hundred baskets of figs at from seventy-five cents to one dollar and fifty cents per basket. Fifty boxes of quinces at an average of one dollar per box; and three thousand boxes of apples at an average of one dollar and twenty-five cents per box. The receipts for cherries amounted to five hundred dollars. The vineyard furnished fifteen hundred boxes of grapes, the black Hamburgs averaging one dollar and fifty cents per box, and the white muscats two dollars. There were more than twice as many muscats produced than there were Hamburgs.

This is the product of the sixty acres of river frontage. There are five hundred and eighty acres of land to be used

for other purposes. From this amount two hundred must be subtracted for tule lands, one-half of which is a lake, the water being too deep for the tule to grow. Once or twice since the present owner has been in possession, the year being exceptionally dry, the lake has been so low that the ground has been cultivated. The soil is unsurpassed in richness. Such quantities of melons as were grown on a small extent of space, and vegetables in such numbers and in such multitudes, that it would strain the faith of any who were uninitiated to believe. A system of drainage is all that is needed to convert these tule lands into the richest and most productive soil.

The residue of the ranch is devoted to dairy purposes. There are kept upon it about forty cows, from which there is a yield of one hundred pounds of butter per week. This is sent to San Francisco, where it is sold at the average price of thirty-seven and a half cents per pound. The cows are not housed in winter, though they are fed a part of the time. There are fifty acres of alfalfa, or Chili clover, which is a species of lucern. This is wonderfully productive. The cattle are allowed to feed upon it from November until May, when they are turned off, and after that three crops are cut for hay, one crop being permitted to stand until the seed is ripe. This seed commands a ready sale in the market, and averages the owner about five hundred dollars per annum. About five hundred dollars' worth of beef is sold annually, the cattle bringing thirty-five dollars per head.

Of course, the master does not sleep while these processes go on. He is a prompt and attentive business man, and everything is kept up to the mark; but his is a life

wonderfully free from anxiety and that kind of fluctuating between hope and fear that is so wearing. There never has been a failure of crop, and apparently there is no danger of it. As long as the blessed sunshine comes to give richness to the pear and sweetness to the grape, so long will the harvest be gathered in.

None but Chinamen are employed on the ranch. The owner will have nothing to do with any other laborers, because he finds in these faithfulness and obedience — qualities which he looks for in vain in any other race. From six to ten Chinamen are kept at work all the time. In the season of gathering the fruit this force is sometimes doubled. In the winter time — winter by courtesy — they plow, prune, graft and transplant. There is no suspension of operations on account of frozen ground or inclement weather, though, of course, there is occasionally a rainy day when nothing can be done. One of the Chinamen has been employed six or seven years, and acts as interpreter and foreman. The laborers receive twenty-eight or thirty dollars per month and board themselves.

The statement of a fact will show to what extent the owner of this ranch trusts the Chinamen in his employ. Three years ago he went east twice; the first time in March, to accompany his family on a visit to their old home in Ohio. In September he went again to bring them back, and each time he was gone six weeks. During both absences he left the Chinamen in charge on his ranch. The whole business was in their hands. They gathered and shipped the fruit and attended to whatever was needed. Of course, as the fruit was consigned, there was nothing to be done in the way of making sales. When the mas-

ter returned he found everything in a satisfactory condition. The Chinamen had been faithful to the charge they had to keep.

This ranch is one hundred miles from the Golden Gate, and both the wind and tide reach it and affect the situation. There is enough of the influence of the trade-winds during the summer to counteract the intense heat of the sun, and it is very seldom uncomfortably hot. Here, as almost everywhere in California, the nights are cool and delightful.

CHAPTER XI.

A CHAPTER FOR TOURISTS.

THERE is a time for all things under the sun. If this is true as a general proposition, it is emphatically so when applied to a visit to California. A very little rehearsing of the climatic conditions will show the reasons.

By courtesy the rains are said to begin in November, but as a matter of fact there are seldom more than a few showers in that month, which barely suffice to lay the dust for a few days.

Rain sufficient to start vegetation cannot be depended upon until December has well advanced. Two or three weeks thereafter greenness begins to creep over the hillsides, and the earth puts on its spring attire. Again, there is seldom much rain after April is past. A few showers come in May, occasionally, but not enough for vegetation to hold its own against the sun.

Sahara is not drier and more desert-like than are parts of California after three, four, five and six months have passed, during which a clear, unchecked sun has been shining upon the thirsty land, drying up the juices of plants and extracting every particle of moisture from the surface of the earth, and down below the surface as far as the heat can penetrate. The dust becomes something fearful, and any kind of wheeled vehicle stirs it up and so puts it in motion that riding is a pleasure to be en-

joyed at the risk of suffocation, or at least of a near approach to it.

Whoever, therefore, would see the country in its best estate must do so between say the latter part of January and the end of April. Every day after the last date will detract from its beauty, and be so much subtracted from the admiration and enjoyment that its meridian glory would occasion.

There is no part of California, no place in it, which tourists will be likely to wish to see, that cannot be visited with entire convenience during the time specified, except the Yosemite valley. On account of the great quantity of snow that accumulates in this locality, a journey to it cannot well be made until the end of May. After the snow is melted, so that the trip is practicable, the sooner it is made the better, because early in the season the streams are fuller and the falls more wonderful than later.

Southern California should be seen in February or March, if possible. The oranges will not then all have been gathered, and everything will be looking its best. The rain-fall is so much less in this part of the State than it is farther north that, of course, it dries up sooner. Let no one who visits this part of the State fail, either in going or coming, to make the trip by land. It is better to go down by sea and return by stage. The ride, to be sure, will be fatiguing; but rest can be taken by the way, if need be, by stopping over a day. After the ride is finished, there will be great comfort in feeling that you have accomplished that for which you went — you have seen something of the country. For how can you know anything about the land by sailing past it on the ocean, especially if you

should chance to be sea-sick and lie in your berth all the while?

After the southern trip you can take the others in whatever order you please. You will probably make San Francisco your base of operations, and you will find much in the city itself to please and interest you. One of the first places that you will visit will be Woodward's gardens, where you will find among the native products some immense "grizzlies" and huge sea-lions, or seals, as they are more generally called. Ungainly and awkward-looking as they are, you will discover a strange pathos in their brown eyes if you regard them attentively enough. If you have the time to spare, you can well spend a day there, and then not feel willing to depart.

Your first ride will probably be to the Cliff House, to see the seals and the Pacific ocean. This is a pleasant ride, and you can take a carriage and have the privilege of paying several dollars for it, or, if "of a frugal mind," you can go in the public conveyances for thirty or forty cents. If you have not seen the Pacific ocean before, that will be the great attraction — the grand sight for which you will most care. But the seal rocks, and the seals sporting on them, will also claim attention. There are three or four of these rocks only a little way out in the ocean. One of them is as high as a meeting-house; but the great lubberly seals contrive to get up to the top of it. These seals are protected by law, and really seem to have a very good time of it. They come up on the rocks to sun themselves, and here they squirm and squabble and bark and play and fight. Those who go often to see them make acquaintance with them as individuals, and even know

them by name. One monster of unusual immensity is known as Ben Butler. What has secured this cognomen for him — whether he is a manœuverer, a wire-puller, or a defeated candidate who has run for the gubernatorial office on an independent ticket, or shown a determination, by "hook or by crook," to lord it over his fellow-seals — the deponent knows not. At any rate, in whatever way he has gained his celebrity, Ben Butler contrives to keep things in motion in sealdom, and maintain a general interest, of which he is the center. "There goes Ben Butler!" can be heard every little while from some of those who are watching through their glasses; and even if he is not seen, it is not always safe to presume that he is asleep, or that he has given up the contest.

Either going to or coming from the Cliff House you will stop at Lone Mountain cemetery, which is the principal one belonging to San Francisco.

The Chinese quarters will be the most attractive because most peculiar part of the city. The sights and wonders visible among these very peculiar people are recorded in another chapter devoted especially to them.

No one will fail to visit Oakland, beautiful Oakland, on the other side of the bay. Although only eight miles from San Francisco, it is so protected by a change in the trend of the coast, and by the hills which break the force of the wind, that the climate is much milder and more desirable. It has, too, more of the sobriety and steadiness of an eastern city than any other place in California. The Sabbath is quiet and well observed, except that there is sometimes disturbance occasioned by picnickers from San Francisco passing through on their way to a pleasant

grove on the farther side of the city. Taking everything into consideration, climatic conditions, social advantages, educational privileges and religious opportunities, Oakland is to-day the most desirable place of residence that can be found in the State.

The University of California, with true western liberality, opens its doors to all, without regard to sex, color or condition, free of charge. This institution is located at Berkeley, five or six miles from Oakland. The site is as charming as can well be conceived. The grounds run up on to the foot-hills of the Contra Costa mountains, and are handsomely ornamented with acacia, eucalyptus and other evergreens, with the beautiful pepper tree sprinkled in here and there to give the finishing touch to the landscape. From every part of the grounds you can look right out of the always open Golden Gate to the limitless ocean beyond. The view alone is worth twice the journey necessary to secure it. The buildings are of a fine granite brought from Folsom, some thirty miles from Sacramento.

The live-oak grove in which Oakland is built has been very tenderly treated. Not a tree has been cut down that could be spared. Trees have even been left standing in some of the streets, and the carriage-ways wind about hither and thither in order to avoid them. But of course this indulgence cannot be continued; as business and population increase, these hinderances to safe transit must be taken out of the way. In Oakland the perfection of beauty exists in the way of artistic combinations and arrangements of flowers and shrubs and trees. The delightful climate and rich soil render such things possibilities when there are found the wealth and the taste to use

them. In the case of one delighted observer, at least, nothing finer, or better, or richer, or more beautiful, is expected to be seen until that better land is entered of whose glories all the most excellent things here are but types and shadows. Indeed, the sight of these has helped the imagination in its endeavor to reach up to the full expectation of that of which it has not entered into the heart of man to conceive.

The bay of San Francisco is a very perfect sort of product, look at it from what point you will — æsthetic, commercial or climatic. It is the only break in the Coast Range mountains between Puget Sound and the Gulf of California, and the only water communication between the ocean and the interior valleys. It is completely land-locked, and is generally conceded to be the second best harbor in the world. It is fifty miles in length, extending both north and south from San Francisco. It reaches about forty miles below San Francisco, in a southeasterly direction. The valley along its western border is one of the finest in the State. Causing a break, as it does, in the Coast Range mountains, the ocean wind comes through, and, following the line of the bay, makes the inhabitants of all the regions round about participants in the refreshing and invigorating influences of the sea-breezes. The average width of the bay is nine miles.

The Golden Gate, as the strait by which it is connected with the ocean is called, is less than a mile in width at the opening, and because it was so narrow it escaped for centuries the scrutinizing eyes of the mariners who sailed along the coast. There are sixty feet of water in the channel. The arrangements for defense could scarcely

be better. The gate-posts, both north and south, are bold projections, which thoroughly and easily command the entrance. Point Bonita, on the north, has a light-house upon it to illuminate the entrance to the bay. Fort Point is placed on the southern projection, just in front of the open gate. Only one mile and a quarter away a little island has been dropped, as though on purpose to furnish additional guards to the entrance.

This island is called Alcatraz, and is bristling with ordnance from bottom to top, and is always ready to repel a hostile invader. Northeast of Alcatraz, and also commanding the entrance, is Angel Island, the largest and most valuable of the three government islands in this part of the bay. Still further from the gate, and east of these two, is the island of Yuerba Buena, or Goat Island, as it is now generally called. This is the coveted morsel that the Central Pacific Railroad has been and is so anxious to swallow. The road extends out into the bay three miles, a wharf being built that distance in a direct line toward Goat Island, to which another mile would bring it. Of course it would be better to have a place on *terra firma* on which to receive and discharge freight than to construct warehouses upon piles so far out in the water. The San Franciscans are hostile to any such arrangements, because vessels could enter the Golden Gate, go to the island, receive and discharge freight, without saying "By your leave!"

The maximum rise of water at full tide at San Francisco is eight feet. The influence of the tide is felt as far as navigation extends, both in the Sacramento and San Joaquin rivers. At Sacramento, one hundred and seventeen miles from the Golden Gate, the rise is two feet six inches,

and at Stockton, which is about equally distant, the rise is not far from the same.

One of the pleasant expeditions from San Francisco will be to San José. This is a beautiful town of ten thousand inhabitants, about fifty miles from San Francisco, and eight or ten from the head of the bay. The town of Santa Clara is three miles distant, and the two are connected by an alameda or avenue, on each side of which are large old willows, planted by the Spanish padres connected with the mission at Santa Clara nearly a century ago. The greater part of the trees have borne the ills of life so heroically that they are still vigorous. San José can be reached by two railroads — one each side of the bay. The court-house in the town is said to be the finest building in the State erected for that purpose. A beautiful picture is spread out before the eye from the top of the dome. Orchards and vineyards, groves and meadows, mountains and valleys meet the vision, while tasteful houses and charming grounds in the nearer space excite admiration.

The climate of San José is particularly attractive, especially in the winter. The winds from the ocean lose much of their fierceness before they reach it, and yet bring enough invigorating influence to make them acceptable and health-giving. In summer the heat sometimes transcends the point of comfort; still it by no means reaches the extreme that it does in valleys shut out from the influences of the sea. This upper Santa Clara valley is the most highly cultivated valley in the State. A ride through it in March will give a vivid idea of the capacity of the genial climate and fertile soil of the country.

The New Almaden quicksilver mines are twelve miles

from San José. These are the oldest mines of this ore in the State, and the most productive. The ore is very rich, yielding in some cases sixty per cent. of quicksilver.

A trip to Monte Diablo is among the things that will pay. This mountain, although not very elevated, is very conspicuous because of its isolation. Having become so well acquainted with it in the distance, it was pleasant to know it more intimately, though it was not the mountain itself, but the view to be had from its summit that formed the attraction.

We were a party of five, in which the feminines had a majority of one. Our wagon was spacious enough to accommodate us all, with our bundles and carpet-bags. We started from Benicia at three o'clock in the afternoon, and, crossing the straits of Carquinez in the ferry-boat, were soon in Martinez. The hills carpeted with green, the smiling fields that gave rich promise of harvests to come, the voice of the meadow-lark, thrown in now and then to give us a thrill of melody, were pleasant adjuncts by the way. An hour's ride brought us to Pacheco, which had rather a washed-out appearance. The winter rains seemed to have been more copious than the needs of the place required. Then we came to a little village called Concord, and from there found a smooth and pleasant road to Clayton, where we spent the night.

As everything depended upon our having a clear day for the ascent of the mountain, the weather was a matter of more than usual interest. There were ominous clouds hanging round the horizon, and when we retired at night we had many misgivings as to what might be on the morrow. During the night we heard the patter of rain upon

the roof and the hoarse voice of the wind in angry violence.

But the morning proved better than our fears led us to anticipate. The face of the sun was clear and bright, as though benefited by its recent washing, and the only trace of the storm visible was the snow upon the top of the mountain.

The summit of the mountain is about seven miles from Clayton, and for half the distance we could keep our seats in the wagon. As some of us had no great confidence in our equestrian skill, we were glad to keep to wheels as long as we could. Therefore our riding-horses were led till we reached the end of the drive. Then came the time of trial. Whether we should be able to retain our seats in the saddle remained, in the case of some of us, a problem to which the Q. E. D. could not be attached until the end of the journey. To those who were at all at home in the saddle there was nothing terrible in the ascent. It is possible to ride all the way to the top, though in some places the acclivity is so steep that walking is easier for the tourist, and certainly more merciful to the horse. The compensation for whatever fatigue there is, is ample nearly all the time. Payment is not deferred until the work is done. We had not gone up far before glimpses of the valleys and the far-off mountains were an earnest of what awaited us when the summit was achieved. There was one brilliant part of the show that we could almost flatter ourselves had been prepared for our special and particular gratification. The storm of the previous night had left its traces on the trees and bushes, which were all encased in ice. The sun shining upon them gave them a

brilliancy of appearance that was dazzling to the eye. Diamonds and all kinds of precious stones seemed waiting to be gathered as fruit from the trees. Clouds passed over the sun now and then, and their shadows flitted over the landscape, making it seem to fluctuate to the eye.

"Dark hollows seemed to glide along
And chase the sunny ridges."

When we reached the summit, such a view was spread out before us as I never dreamed could be taken in by the eye. On one side we looked out through the Golden Gate to the boundless ocean beyond; the Farrallones lay there like specks in the ocean; nearer was San Francisco, spread out like a map, with every street distinctly marked. Vallejo, Benicia, Pacheco, New York, Antioch, and several other towns could be easily seen. All this was viewed with the naked eye. Think of seeing the whole State of New York at a glance!

Prof. Whitney says: "From the summit of Monte Diablo the view is panoramic, and perhaps unsurpassed in extent. Owing to the peculiar distribution of the mountain ranges of California, and the position of Monte Diablo in the center of the great elliptic basin, the eye has full scope over the slopes of the Sierra Nevada to its crest, from Lassen's Peak on the north to Mount Whitney on the south, a distance of fully three hundred and twenty-five miles. It is only in the clearest weather that the details of the 'Snowy Range' can be made out; but the nearer masses of the Coast Range, with their waves of mountains and wavelets of spurs, are visible from Mount Hamilton and Mount Oso on the south to Mount Helena on the north. The great interior valley of California, the plains of the Sacra-

mento and San Joaquin, are spread out under the observer's feet like a map, and they seem of illimitable extent. The whole area thus embraced in the field of vision is little less than forty thousand square miles, or almost as large as the whole State of New York."

Of course no tourist will fail to visit the Geysers. There are two ways of reaching them, by way of Healdsburg and by way of Calistoga. The former route leads past Petaluma, Santa Rosa, etc., to Healdsburg, and then over "the hog's back" to the Geysers. It is well to go one way and return by the other.

We left San Francisco at four o'clock in the afternoon in the steamer, and in an hour and a half were on the other side of the bay at Vallejo. The cars awaited us here, and we were whisked through the beautiful Naper valley more rapidly than we wished. This is one of the most beautiful and fertile districts in California. It would be difficult for the elements of fine scenery and charming landscapes to enter into combinations that would surpass what is here seen. Oaks, the magnificence of which could scarcely be surpassed anywhere in the world, dot the landscape here and there, while orchards and vineyards and fields of golden grain — golden at the time of our visit — interspersed with "patches" of Indian corn, the first I have seen in the State, make up a wonderful beauty of shade and color.

Just at evening we reached Calistoga Springs, where we remained all night. There is much that is attractive about this place. Springs of almost every kind are found, hot, cold and tepid. One spring seems especially designed for the accommodation of the laundress. The water is soft

and clear, and just hot enough to make a good "suds." That it may be applied to its legitimate purpose a wash-house has been erected, where clothes go through the process of purification.

When strolling about the grounds in the morning a tasteful, rustic structure arrested my attention. "Nature's Kitchen" was written over the door in large letters. It seemed worth while to go in and see how the dame acquitted herself when she ventured into the department of culinary art. If she performed her duties as deftly in that line as she does her work generally, there might be something learned from an investigation. The door was entered. A comely youth seemed to be acting as the old lady's adjutant. He asked if I would have some chicken broth. The reply being in the affirmative, he proceeded to dip some water from a spring which was bubbling and boiling all the while, and, adding a little pepper and salt, he presented the cup. It was chicken broth, sure enough! and almost too hot to eat with comfort. In what subterranean fields the chickens were fed, and how far underground was the kitchen in which they had been prepared and put in the pot, there was no witness to testify.

Near by was another queer sort of structure, which proved to be a grotto made of petrifactions brought from a petrified forest some five miles south of Calistoga. This forest is on a ridge which separates the Napa and Santa Rosa valleys, and was discovered in 1870. The examination that followed the discovery led to the finding of parts of one hundred or more large forest trees in a state of petrifaction. They were all prostrate, and seemed to belong to living species of coniferæ. It is supposed that

THE DEVIL'S CAÑON. VIEW LOOKING UP. Pages 153 to 160.

the overthrow of the forest was occasioned by some eruption of Mount St. Helena.

At seven o'clock in the morning we took our seats in the coach and started for the Geysers. The tourists filled three wagons that morning. These were open-covered, four-seated vehicles, each drawn by six horses. The first ten miles was through a farming country, and level a great part of the way. Then we changed horses, and the perils of the journey began. We commenced the ascent of the mountains, and for ten miles wound along their sides, rising higher and higher at every step. The road is a marvel. It is cut in the sides of the mountains, and follows all their windings in and out, turning angles as sharp as the crook of one's elbow, with only about six inches of leeway, and seeming, in places, not to have even so much as that where the road is excavated in the solid rock. As we ascended, the views became continually finer and finer. We looked off over mountains that seemed to rise one upon another, and to follow each other in almost endless succession. They were clothed with firs and pines to their very summits. In the distance lay the Pacific ocean, glistening in the sun and seeming near, though seventy miles away. Mount St. Helena was the presiding genius of the near landscape. Although only about four thousand feet high, it overtops its compeers, and is the observed of all observers. It was named for the Grand Duchess Helena of Russia, by the gallant Russian who first ascended it in 1841. He placed a metallic plate upon the summit, to bear record of his ascent, and to record the name which he had bestowed upon the mountain. The plate was afterwards taken possession of by the

Geological Survey, and removed to San Francisco for safe-keeping. We rested a little while on the top of the divide, and then began our descent. If one has nerves, then is the time to find it out. The drivers put the whip to the horses, and down they go at the most break-neck speed, sweeping around curves, turning angles sharply acute, the hubs of the wheels almost touching the sides of the mountains on the left, while on the right you look down precipices two thousand, three thousand feet. The eye cannot fathom the depth to which the giving way of a tug, the striking of the hub against the rock which it approaches so nearly, might precipitate the load of living freight. Dark chasms seem yawning to devour you. At last the race is over, and we draw up suddenly and unexpectedly at the Geyser hotel.

All preconceived ideas of the Geysers were doomed to be disappointed. The pictures in the Geography, of the geysers in Iceland, had perhaps unconsciously been the models upon which expectations had been formed; but they proved very wide of the mark. Pluton river runs along just in front of the hotel, and continues on its winding way until it finds the Russian river, into which it empties. The gorge through which it runs is quite narrow, and is called Pluton cañon. There is said to be fine trout-fishing in this little stream, and some conveniences are provided which are not always found in conjunction with opportunities of the kind. There are places where the fisherman, after having caught his fish, without moving may cast it into a hot spring, and bring it out done to a turn and ready for eating. Not very far from the hotel there is a hot, acid spring, to the water of which, if

a little sugar be added, the perfection of hot lemonade is produced. One visitor, that I know of, tasted the water fresh from the spring, and a blistered tongue bore testimony to its heat for several days. There is a bath-house over a hot spring in Pluton cañon, a bath in which is a luxury to be remembered.

Geyser cañon opens into Pluton at rather an acute angle. We entered at the lower end, and soon the hissing, shaking, roaring, and quaking began. The forces of Pandemonium seem to be released, and to have collected here to try what they can do. Passing alum springs, sulphur springs, black as the fabled Tartarean gulf, and many other kinds of springs, we come to the Devil's Inkstand. Whether he uses the ink for making records or not, other people do. We were told that the register at the hotel was kept with it, but in the case of one of our company who tried it, it did not prove durable. The writing soon faded, and after a while was obliterated.

The ground becoming hot, rapidity of motion is a necessity, and yet each time you put your foot down with hesitation, as though it might perchance get into the way that takes hold on death. The air becomes oppressive, steamy, thick, sulphurous. You gasp; you hesitate; you conclude that this is one of the places in which it may be pleasant to have been, but it is anything else than pleasant to be in!

The way is slippery and the slime is ghastly, supernatural, infernal. The cañon is so narrow that there is scarcely any room to spare by the side of the creek that runs through. We are obliged to go first on one side, then cross over to the other, ascending all the while a pretty steep grade. We come to a chair-shaped rock

which is called the Devil's Chair. Finding it vacant we do not disdain to take a seat for a few minutes to recover breath and wipe off the perspiration. Sulphur, and many compositions of which you do not know the name, are around you. Everything wears an unearthly look, and you can easily persuade yourself that you have indeed invaded the dominions of the Infernal Majesty, to whom the whole region seems to be given up, and whose stamp everything wears. Soon after we come to the Devil's Pulpit. What he wants of a pulpit it would be difficult to guess, unless it be in those times when he arrays himself in garments of light the better to deceive his victims. The Devil's Grist Mill, which he makes a great noise in turning, is near by. But far above all other sounds the Steamboat Geyser makes itself heard. The resemblance to a steamboat letting off steam is perfect. This noise is made by a column of steam rushing out of the side of the mountain. It sometimes ascends to the height of three hundred feet. Near this is the Witch's Caldron, as weird-looking a place as can well be imagined. It is a black hole seven or eight feet in diameter, and is said to be absolutely unfathomable. It has been sounded to the depth of twelve hundred feet without reaching bottom. The rock is black in which the cavity lies, the mixture is black, and it is boiling, bubbling, seething around, now rising to within a foot or two of the top, then falling back, hissing, steaming and howling as though it had been balked in its efforts to accomplish a purpose. I looked down into it almost expecting to see

"The eye of newt and toe of frog,
Wool of bat and tongue of dog."

Undoubtedly they were there, but they were undistinguishable in the diabolical mixture that continued to "like a hell-broth boil and bubble." In another place we found the Devil's Tea-kettle. I wonder what kind of tea he uses! There is much in our markets that might be sent to him; it might not hurt him, and surely the tea-drinkers in the world would be the better for its loss. Finally the summit of the route is reached, over which streams the tricolored flag, and we feel that we are once more in our native country. There is a feeling of relief that we have passed through the dominions of our arch-enemy and —are safe!

These curious and wonderful processes are now decided to be wholly the result of chemical action; volcanic power has nothing to do with them; the amount of moisture affects the manifestations. Heat and chemicals are always in the great laboratory, and when enough moisture is added all the conditions for activity are met.

On our return we were so fortunate as to have a seat in the wagon driven by Foss, whose renown is coextensive with the fame of the Geysers. That ride was worth the whole expense of the journey. Not a loud word was spoken; not a crack of the whip was heard. The reins seemed to be nerves to convey the will of the master to the steeds, that seemed to delight in obedience. On we dashed, bounding around corners and shooting around angles. The heads of the leaders were often out of sight, so sharp were the curves and so rapidly did we go.

Foss drives the last eighteen miles in an hour and three-quarters. No accident, it is said, has ever happened upon the road, notwithstanding it is driven over so rapidly

The cost of the round trip from San Francisco and back is now estimated at sixteen dollars. When the writer made the trip the cost was twenty-five dollars.

The beautiful beach at Pescadero is well worth a visit, and pebbles picked up there will be among the valuable trophies brought from the Pacific coast.

Pescadero is on one of the routes to Santa Cruz, which place should not be omitted if it is possible to reach it. It is the Newport of California. Being situated on a cove in the bay of Monterey, it is so protected from the winds as to be a very desirable summer resort. It is a place of considerable business also, being second in this respect to San Francisco. Tanneries are especially abundant, and a large amount of leather is manufactured. One reason for this industry is the abundance of chestnut-oak that abounds in the vicinity. The bark of this tree contains more and better tannin than that of any other tree. Large quantities of sole-leather are exported, which on account of its superior quality commands an extra price in the market.

The six weeks spent in Santa Cruz by the writer have left many pleasant memories. The visit was made during the months of July and August. The mornings and evenings were so cool that a little fire was almost always needful for comfort, and even at midday a heavy shawl was essential when riding in an open carriage. The rides are delightful in the vicinity, and one should never be finished without going to the beach and driving up and down a few times. There was but one drawback to the pleasure of riding, and whether that drawback should come under the geographical head of climate or soil ad-

mits of doubt; for it was fluctuating—now on the earth and now in the air. The dust was sometimes suffocating, blinding, tormenting. The soil was entirely too free for comfort; the laws of gravity seemed to have no dominion over it.

It was here that acquaintance with Ying was made. He had penetrated further into the *arcana* of the cooking art than any other "Heathen Chinee" that it was my good fortune to fall in with. Such appetizing viands as he set before us—such combinations and excellent results—it was an uncommon thing to meet with. He was caterer, steward and factotum in the establishment. The mistress said, why should she give orders when he knew so much better what was needed and what was best? He was a rarely good laundress too. Snow is not whiter nor glass smoother than the clothes that he sent from his workshop. He sprinkled while he ironed. Putting his mouth down to a basin filled with water, and sucking in as much as convenient, he again emitted it in a fine spray, making a noise meanwhile like an incipient steamboat, which could be heard over a considerable part of the house.

Ying had the strange peculiarity of liking to have his own way, and when told to do anything that he did not want to do, he always took refuge in his imperfect understanding of the language: "Me not know." How could he, poor heathen!

Ying adhered to the national customs in his dress. His head was shaved, except a round place on the top about the size of a saucer. The hair which grew upon this portion was braided, and coiled about like a crown.

What the longitude of this cue would have been if it had been allowed to stretch itself out there were no means of knowing. Ying wore the loose, blue blouse that is so generally seen in the streets of San Francisco, with loose trowsers of the same color, made after the Turkish fashion.

Forests of redwood abound in the region of Santa Cruz, and are not among the least attractive things to be seen. The old town of Monterey, the first capital of California, is across the bay and easily visited.

No traveler should go to the Pacific coast and return without stopping to see Lake Tahoe, one of the most beautiful lakes in the world, as it is one of the highest. By leaving the Central Pacific railroad at Truckee it can be seen without fatigue, and without any great delay. It is only fourteen miles from Truckee, and a good stage road, over which there are daily coaches, makes it within easy reach. Lake Tahoe is six thousand four hundred feet above the level of the sea — higher than Mount Washington, that giant among the peaks of New England. Estimates of its size vary; by some authorities it is put down as being thirty by fifteen miles, and by others twenty by ten.

It was cloudy the day we reached it, and the clouds rested, not on the tops of the mountains which surround the lake, but on their sides, while the summits stood out boldly in the clear atmosphere. As though the lake said to them, "Come rest on this bosom," they nestled closely down, as if glad to find so beautiful a resting-place. A pleasant little steamboat goes back and forth, carrying passengers to the different parts of the lake. Never was water so clear and so blue. We could look down forty

or fifty feet and count the pebbles on the bottom, and see the fish glide along, and the water-snakes wound up in their coils. The sky itself was not bluer than the water, and the tint was particularly soft and bright. The lake abounds in trout, which are of an unusually large size.

A ride in a row-boat, one pleasant morning, was particularly enjoyable. We went over to Cornelian Bay, and along the first part of the way the lake was as calm as a summer evening. The water which dripped from the oars, falling into the lake, made little circlets which the sun at once converted into rainbows. These spotted the surface, and myriads of little rainbows danced hither and thither, some larger, some smaller, but all gay and beautiful. A breeze sprang up while we were out, and when we returned there was another and different display. The breeze roughened the surface of the lake, and the sun shone in such a direction that the crest of each little wavelet was converted into a brilliant diamond; thus they were glistening all around, dancing here and there, and all diamonds of the first water!

The mountains stand round about this lake as they do about Jerusalem, making such scenery as one does not easily tire of seeing.

The line which separates California from Nevada passes through the lake, so that a part of it is in one State and a part in the other.

Donner lake, so well known for its sad associations, is a beautiful little lake on the other side of Truckee, and in full view of the railroad. It is well worthy of a visit and a nearer acquaintance than can be had from the railway.

The cost of living differs greatly in different parts of the State. In San Francisco and Oakland it is about the same in gold that it is in Philadelphia or Cincinnati in currency. The charge at hotels is about three dollars per diem; at boarding-houses, almost anywhere between ten and twenty dollars per week. Many persons, to whom it is convenient or desirable, rent furnished rooms and take their meals at restaurants. The charges in restaurants are less than in eastern cities. A breakfast or lunch, consisting of a cup of tea or coffee, a mutton-chop or piece of beef-steak, potatoes, bread, butter and pickle, can be had for twenty-five cents. A certain person, in whom the writer has a first-class interest, who was scantily blessed with "filthy lucre," contrived to live in Oakland, during the whole winter, at an average cost of five dollars per week. Two of these dollars went for room-rent, and the remainder covered the cost of board, fuel, washing, and all other needful things. To be sure, many things were sacrificed that it would have been pleasant to have; but the privations were borne cheerfully, and amends were sought and found in seeing and enjoying the charming grounds of Oakland, which were a continual feast that never palled upon the taste, and in an occasional visit to San Francisco, over the waters of the beautiful bay. In making any such arrangement, be sure and get a room into which the sun shines a part of the day, and the larger the part the better. The days are rare, in Oakland and San Francisco, when it is really comfortable in the morning and evening without a fire. But when the sun is shining, if you have a room into which its beams can enter, you will always be warm enough. The prices of some things essential to

living are less in California than the east, while of many the cost is greater. Flour is both cheaper and better, and the price of meat and fish is less; but fuel is very expensive. A considerable part of the coal used is brought from England and Australia, and the remainder comes from Oregon.

CHAPTER XII.

A CHAPTER FOR SETTLERS.

SOMETIMES an affirmative is best reached through a pathway of negatives.

Those persons should not go to California with any expectation of prospering in material good who have not the tact and energy and enterprise to succeed in "the States."

There is not one element essential to success elsewhere that is not needed there; the urgency of an increased need might be emphasized. It is true in California, as it is in other countries, that the easy places are already occupied. There is a superabundance of clerks, book-keepers, teachers, civil engineers and professional men generally.

It is no longer the fact that fortunes can be made in a day in California, as they once were. He who would thrive must do so there, as he would anywhere else, by patient industry, by economy and by earnest endeavors. No one should go there expecting, or even hoping, that in some fortunate moment he may come across a nugget of gold that will prove a nest-egg out of which can be hatched a fortune.

But to one who goes expecting to endure hardship, expecting to toil, and especially expecting to *save*, the avenues to comfortable living are many and sure. There is a tendency to large expectation growing out of the influence of early mining operations, when money was made rapidly, spent lavishly and all business transacted in a

grand way — when expenditures were on a scale of magnificence that already seems almost fabulous, and marks that period as having been literally the golden age. Although the time is past, the influence of it still remains. It is perceptibly diminishing year by year, however, as is shown by the fact that dimes are coming into use, and even half-dimes are sometimes seen, while only a little while ago a man scorned to look at anything less than a quarter. There is no better index to the precision in trade and the economy in commerce which prevail among a people than the value of the coins in use. The more careful the expenditure the lower will be the denominations of the medium used.

At present it would seem that the first and strongest attraction is toward agriculture, in some of its numerous departments. California is truly a paradise for farmers. The summer is not spent in raising grain and other products to be eaten up by man and beast in winter, while nothing can be done; but the farmer continues steadily at productive labor all the year round. Nothing requires to be housed or fed except the working-horses, or possibly the milch-cows, which will need to be fed a small part of the time.

If near a market, or if a market is easily accessible, fruit raising is one of the most profitable as well as pleasant kinds of farming. Less land is required than for raising grain. There does not seem, at present, any danger of the supply exceeding the demand, as is shown by the price of fruit in the market of San Francisco. Most kinds of fruit sell for more than they do in St. Louis or Cincinnati. Even grapes, that grow everywhere so lux-

uriantly and yield so abundantly, sell for more than they do in St. Louis. Eight cents per pound — three pounds for a quarter — is about the usual price, though they may occasionally be found for five or six cents per pound.

The cultivation of small fruits is very profitable. Strawberries, raspberries and currants always sell well, and can be easily cultivated if arrangements for irrigation are secured.

There is beginning to be much doubt as to the profitableness of the large-ranch system which has prevailed so extensively in California. It is a well established fact that very few of the owners of large ranches have become rich, and in a majority of cases the original owners are poor men now, their lands having passed into other hands. Some of those who continue in possession are cumbered with debt and troubled to know how to make the ends meet. Of course there are exceptions to this rule. There are owners who have the tact and energy to manage in a way to bring in large profits. It is especially true in the raising of grain that there must be land enough to cultivate considerable quantities in order to make it profitable. Labor is expensive, and machinery must be used as far as possible in its stead. Steam and horse power must take the place of horses. Such machinery is expensive, and there must be large profits to make it pay. There is probably no country in the world that admits of so varied a range of agricultural pursuits, because there is no other where it is possible to cultivate so great a variety of products. It would only be telling what is already known to write about fruits, grain, etc. Statements will, therefore, be confined to some of the more recently tried

experiments and to some of the urgent wants not yet met.

The wheat crop of California is handled in sacks. There is but one grain elevator in the State. Boats pass down the Sacramento and up the San Joaquin rivers loaded with sacks of wheat, which are piled up many feet high and lie uncovered and exposed. The immunity from rain makes it safe to transport grain in this way. The sacks thus used are made of jute, which is raised in India, taken to Scotland and manufactured into bags and then brought to California. Of course there must be a profit for the producer of the jute, another for those who take the crude material to Scotland, another for the manufacturer, and yet another for the importer, by whom it is brought to this country, and finally, if the sacks are not bought at first hands, a profit goes into the pocket of the retailer. It is not strange that all these items added together make a large aggregate which it takes one-eleventh of the entire wheat crop to pay. The cost to the State for sacks is about two millions of dollars per annum. The price is about fifteen cents per sack, but in times of scarcity it sometimes goes up to seventeen or eighteen cents. Already something has been done toward supplying this demand. A factory in Oakland turns out one million of bags annually, and more than a million are manufactured elsewhere in the State. The jute is imported directly from India. The sacks can be made for fourteen and a-half cents apiece and yield a fair profit. Any soil and climate that will produce corn will also produce jute. It is less difficult to raise than cotton, and more profitable. Recently the experiment of growing jute was successfully tried on Kern Island. The

man or men who would go into central or southern California and enter upon the business of raising jute would be sure of large profits, and have a much better chance to make a fortune than though they owned a gold mine or shares in a diamond field. The value of the wheat crop of 1875 in California was twenty-six millions of dollars, which is only eighty per cent. of that of 1874, because of the deficiency of rain causing a poor crop. To provide sacks for such a quantity of wheat is an item of great importance.

Cotton-raising has passed beyond the period of experiment, and taken a position among established facts. Mr. J. Ross Browne says: "Experiments made in the culture of cotton show conclusively that this will soon become one of the great staples of the Pacific coast. The area of land suitable for its growth is, however, limited. It requires moisture, heat and comparative exemption from frost. The alluvial lands of the San Joaquin valley adjacent to Kern, Buena Vista and Tulare lakes will, in all probability, prove as valuable for cotton lands as the best lands in Georgia. Cotton produces fiber in diminished quantity, though of improved quality, when removed from a southern locality further north. It never seems to be injured by the most intense heat. When other crops, including even Indian corn, are drooping under a blazing sun, the large succulent-looking leaves of a cotton field will seem to enjoy the congenial atmosphere. Cotton is decidedly a sun-plant."

California is particularly fitted for the growth of cotton. The period between the late frosts of the spring and the early frosts of the fall is longer than is required to mature the plant, and the absolute immunity from rain

allows a long period for picking after the balls have matured, without any danger of damage by rain.

There being no rain in summer, weeds do not grow, and the cotton has the whole strength of the soil. This is particularly well adapted to cotton. Sandy soil is found in the valleys and the adobe lands corresponding almost exactly with the black lands in the South, which are regarded as normal cotton soil.

The staple produced in California is superior to the great bulk of the production of the southern States.

Cotton, when it requires any irrigation at all, needs less than half the quantity necessary for the production of Indian corn. The expense of its cultivation does not exceed that of corn, while the profit is much greater, and the cost of transportation is only a fraction of what it is for grain. In the southern States it costs twelve cents per pound to raise it; in California, not more than six or seven cents. There is scarcely any plant that requires so little moisture, and none for which irrigation is so well adapted. The time may come when California will rank as the best cotton-growing State in the Union. The Legislature has done what it could to encourage effort in this direction.

Experiments in the cultivation of rice have been sufficiently successful to warrant the expectation that this will become one of the profitable crops of the State, when complete arrangements are made for irrigation. Rice requires so much water that nothing can be done satisfactorily in the way of raising it until the natural supply of the essential commodity can be supplemented.

In Fresno county experiments have been tried in raising coffee with a good degree of success.

Tea has also been tried in Santa Barbara county and elsewhere. Although its growth has been proved a possibility, it may well be doubted if it can be cultivated with profit so as to compete with China and Japan. Labor is so much dearer, and so much manipulation is required in the preparation of the article, that the cost can scarcely fail to be greater here than there.

Increased attention is being given to the dairy business. The yield from this source was five million dollars for the year 1875. The business is found to be profitable in whatever part of the State it has been attempted. In Marin county, north of San Francisco, there are some fine dairies in which large profits are made.

At present there is, probably, no branch of business more profitable than sheep raising, whether tried on a large or a small scale. A man who has sheep has also credit, for it is known that twice in the year he is sure of turning the product of his labor and care into gold; that is, in those parts of the State where sheep are sheared both spring and autumn. The chances for this business are better in the northern than in the southern portion of the country. There is more rain, and consequently the pastures do not dry up so soon. Humboldt county is an attractive point.

Sheep are often let out on shares; the wool and the increase being divided equally between the owner and the one who takes care of them. Hence in this business a man can get a start without capital. But he must be willing to "deny himself." For the time being he will be obliged to turn hermit, and care only for his flock. He must be with them by day and near them by night;

and if he goes to the mountains or on to the large tracts of unsold government lands, it will involve complete isolation. It is estimated that one man can care for two thousand sheep. The profits are large and sure, and a man may comfort himself by looking forward to the near future, when he will have such an increase of means as will enable him to make other arrangements if he choose. With good care the increase will be one hundred per cent. per annum, and there will be the wool besides.

The most desirable way of emigrating is to go in colonies. Take your friends with you and you will have society that suits you, and will thus escape the longing and disquietude of home-sickness. Make up your mind before going that there will be hardships and privations to be endured,—there must always be in breaking up old homes and establishing new ones, especially if means are not abundant. Go in the fall, early enough to get in crops before the winter rains set in; and be sure of *water*—whatever else you lack, see to it that you have this *sine qua non*. With it you can raise almost anything that grows on the face of the earth; without it crops will be uncertain and failures frequent. Either go where artificial irrigation is not necessary, or where it is provided for by canals and artesian wells. These wells succeed wherever tried, and on account of the constancy of the winds they are easily worked by means of windmills.

There is also great demand for skilled labor. Mechanics and artisans will find abundant occupation, and get good wages. San Francisco does the lion's share of the manufacturing executed in the State. With a population of two hundred and fifty thousand, the returns of the last

year show that this city produced nearly three hundred dollars' worth of manufactured goods per capita. The kinds, number and amount of manufacturing done would surprise those whose knowledge has not kept pace with the growth of the city. There is almost no limit to its industrial development. The principal drawbacks are the high price of coal and iron. The cost of the former ranges from nine to eighteen dollars per ton, giving an average of about twelve dollars; the latter is at present forty-six dollars per ton.

Do not establish your faith and found your expectation upon any basis that has the lottery-principle for its support. Be sure that there are many prizes and but few blanks before you invest. Three crops out of seven will not do for a farmer.

If you are blessed with sufficient pecuniary means to enable you to live comfortably, and go to California for the sake of having a pleasant home in a most salubrious and delightful climate, Oakland or its vicinity would perhaps suit you better than any other part of the State. You would there miss but few, if any, of the religious and social privileges to which you have been accustomed. If the lungs are not quite sound, or there is any tendency to sensitiveness in these vital organs, go further from the coast — to San José, or, better yet, to Santa Barbara. If climatic conditions alone influence your choice, undoubtedly the latter place is the one to which you should direct your steps.

No one thing was more of a surprise to the writer than the security there seemed to be to life and property. The influence of the vigilance committees is still felt. On the

VERNAL FALLS. (350 FEET HIGH.) PAGES 227, 228 AND 229.

two ranches described elsewhere the doors of the houses were not only left unfastened at night, but sometimes wide open; and that with money left loosely in an unoccupied room below stairs, while all the family slept above! It was only by drawing bolts and turning keys in the doors of the particular room occupied that the denizen of eastern towns and cities could be sure of a sufficient degree of safety to make sleep a possibility. Theft seemed to be almost an unheard of thing in California.

Another of the notable facts is the attention paid to schools. The schoolmaster is abroad everywhere in the land. The best house in the small towns and villages is frequently the school-house. The public schools in the larger towns and cities do not seem to be one whit behind those in eastern towns and cities. Seminaries for girls are quite numerous, and many of them well conducted. The oldest in the State, and one of the best, is in Benicia, a very pleasant town on the straits of Carquinez. In the days when the capital of the State was peripatetic, and the quick-wittedness of school-boys was tested by their ability to answer correctly the question, What is the capital of California? Benicia had the honor of being, for a season, the place where the legislators gathered themselves together.

The want of religious privileges is sadly felt in the rural districts and thinly-populated parts of the country. The influence of the miners and early settlers was not, and is not now, strongly felt in favor of the support of churches and religious ordinances. Very often it is decidedly opposed. The Sabbath is a holiday when visits are made and social enjoyments sought for. Still, in these

respects there is constant progress, and there is only need of the helping hands of those who go, to bring about a better state of things.

The last word of advice to would-be settlers is this: If you wish for full and reliable information in regard to California and all or any of its interests, apply for the same to the California Immigrant Union, No. 328 Montgomery street, San Francisco, and, if the writer may judge from her own experience, you will be served promptly, amply, and without cost.

CHAPTER XIII.

THE CHINAMAN IN CALIFORNIA.

JOHN CHINAMAN is too important an institution in California to be dismissed with a mere passing notice. There is no question connected with the development and present condition of the State to which the writer gave more patient and unprejudiced attention than to this. What has been the result of the immense emigration from the "Central Flowery Kingdom" upon the material interests of the Pacific coast? Have these almond-eyed laborers been a help or a hinderance? Truthful answers to these questions were sought for with diligence, and every means of gaining accurate information called into requisition. Personal observation and competent testimony were arranged side by side and compared. Among intelligent men there seemed to be no great difference of opinion as to the beneficial results of their labors as railroad builders, as miners, as gardeners, as agriculturists, and as assistants in manufacturing establishments.

As to their employment in any of these capacities, the verdict was almost always in their favor. That without their help in these directions the natural wealth of California could not have reached its present development in a quarter of a century to come, was generally admitted.

The old idea that Chinamen are specialists and imitators only has generally been thrown aside by those

who come to know them well. There is need of but little study of their character as a nation to show that such notions of the Chinese are *prima facie* untrue.

In all the world's history, China furnishes the sole and only example of a nation that has worked out its own salvation from barbarism and come up unaided into the light of civilization. Even ancient Egypt, the cradle of the sciences, kindled its lights at the hearth-stone of the race in western Asia. Greece borrowed light from Egypt, and Rome transferred the firmament, all ablaze with light, from conquered Greece to her own imperial realm. But China, walled in by a cordon that was almost impenetrable, grew up from a barbarism common to all the nations into the full stature of a civilized country from its own inherent power and genius, without help from abroad or any imported influence. When Buddhism was introduced into China, in the second century after Christ, the people had already advanced beyond anything that Buddhism could do as a civilizer.

Niebuhr made the assertion "that no single example can be brought forward of an actually savage people having independently become civilized." But China accomplished this impossibility without a model and without a helper. What no European nation has ever done this Asiatic people accomplished; and they were already well advanced in their progress when Greece was dimly spelling out its alphabet by the help of the flickering light brought from Egypt; when our own Saxon ancestors were clothed in skins and feeding on acorns; and when they were worshiping Odin, and making huge wicker images to be filled with smiling babes and rollicking children

taken from their mothers' arms and burned in honor of their god, the Chinese were already living in houses, obeying the law of marriage, draining swamps, clearing jungles and cultivating the ground thus reclaimed. Without admitting the full extent of their claims to antiquity as a nation, the laws of evidence require us to accept as true the words found in their annals, dating back to the reign of Fuh-hi, two thousand eight hundred and fifty-two years before Christ. They not only admit their original barbarism, but show by historical records how they advanced, step by step, from the starting-point. Fuh-hi himself gave a new impulse to their progress. He found the people dwelling in huts and caves, clothed in skins and living promiscuously together. He left them, at the end of his life and reign, occupying better houses, wearing better clothing, eating better food, and obedient to the law of marriage. In the second century after Fuh-hi the cycle of sixty years was introduced as a mode of computing time, and has been in use ever since, more than forty-five centuries. No other chronological era ever lasted so long. Two thousand years before Christ, when as yet Troy and Athens were not, the Chinese had an alphabet, rude to be sure, but still sufficient for a purpose. They knew the properties of the arch, observed and made records of solar eclipses, used iron in the construction of bridges, and had some practial knowledge of metallurgy, specimens in the workmanship of which have come down to the present day. The Chinese wall was built two hundred years before Christ. There is a story current, though not altogether well authenticated, that eleven centuries before the beginning of our Christian era a chariot was presented to certain ambassa-

dors which had box-compasses fitted to the wheels to direct them on their homeward way. Whether this be true or not, there is proof that the loadstone, and its power to affect iron, was known to the Chinese long before the coming of Christ. The daily newspaper, which we are accustomed to look upon as a modern invention, is an old, old story in China. The Pekin "Gazette" has for five hundred years been making its daily round throughout the empire. It is an official paper, and upon all subjects represents the opinions of the Government. At the commencement of cold weather, or of the opposite, the highest officer or viceroy in the province assumes the winter or summer cap, as the case may be; the circumstance is noticed in the "Gazette," and is a signal for every man under the government of said viceroy to make the same change. In this way everything of which it is desirable for the people to take cognizance is noticed. The "Gazette" is racy and spicy, but in one respect must be quite in contrast with some journals that we wot of; everything must be true that appears in its columns, and the Chinese Jenkinses can say nothing of ladies! They are an imponderable force in this empire, and unworthy of notice.

After the time of Confucius the advance of the nation was more rapid than before. Among all the sons of men there has been no more wonderful man than Confucius; no other whose influence has been so lasting and so far-reaching. Twenty-five centuries have only served to extend the range of his influence and increase its power. During all these centuries his teachings have molded the character and governed the lives of the most populous nation the world has ever known. There is still no sign of

desuetude in the customs he established and the principles he taught. When a foreign dynasty seated itself upon a conquered throne the systems of the conquerors were thrown aside, and the moral science and civil polity of the conquered were accepted in their stead. Therein was followed the example of the Romans, who took for their school-masters the very people whose national life they had extinguished. Confucius was born in the year 550 before Christ. Pope says of him:

> "Superior and alone Confucius stood,
> Who taught that useful science, to be good."

No higher morality can be inculcated than he exacts. Among the great teachers that have come into the world he is second only to Him "who spake as never man spake." The difference between the former and the latter is the difference between the perfect skeleton clothed upon with flesh and blood, with muscle, sinew and integument, yet wanting vitality; wanting the informing soul and the living, breathing, moving being, having all the former attributes and added thereto the immortal spirit. Confucius taught the "form of godliness," but it was lacking in power because the spirit was wanting. He drew his motives from well-being in this life only, never referring to the Divine sanction or the rewards of immortality.

"What you do not want done to yourself do not to others," he says, putting into the negative form the "golden rule," which we have had from a higher Master. "When you know a thing, to hold that you know it, and when you do not know it, to allow that you do not; this is knowledge." A kind of knowledge for which none is the worse for being the possessor.

But Confucius made no pretensions to being a religious teacher. On the contrary, he expressly acknowledges his inability to give instructions in regard to a future state or anything that concerned men after death. He said: "I do not know what life is; how then can I explain death or declare what comes after?" The results are what might be expected from the character of the instruction. While the Chinese have advanced steadily in material prosperity, in coherence as a nation and in the knowledge and application of the useful arts, they have been, and are, spiritually dead.

One of the chief misfortunes that resulted from Confucius' ignorance of the Creator, and his plans and purposes in the creation of man, was the false position he assigned to woman. The consequences of error always fall most heavily upon those who are the least able to resist them. Therefore women have been, and are, the great sufferers on account of his mistake. Confucius did not place woman on a common throne as the equal of man — his consoler and inspirer; only Christ did that. He made her the handmaid of man, to minister to his pleasure and have for her "sphere" whatever he did not want to do; this was the vitiating principle in the Confucian system. As the fountain cannot rise higher than its source, the son can never rise very much above his mother. Therefore the status of woman is the true index to the grade of civilization. What Confucius thought of women, and what the character of his instructions was, may be judged by the following extracts from his teachings:

"Moreover, that you have not in this life been born a male is owing to your amount of wickedness, heaped up in a previous state of existence, hav-

ing been both deep and weighty; you would not then desire to adorn virtue, to heap up good actions, and learn to do well! So that you now have been haplessly born a female! And if you do not this second time specially amend your faults, this amount of wickedness of yours will be getting both deeper and weightier, so that it is to be feared in the next state of existence, even if you should wish for a male's body, yet it will be very difficult to get it!"

"You must know that for a woman to be without talent is a virtue on her part."

"No one desires that your *naturæ* should be intelligent, or your abilities of a high order. They only wish that your disposition be mild and obedient, and that, in looking after matters, you be diligent and economical."

"Wives! ye cannot but impress these words upon your memories. In the male to be firm, and the female to be flexible, is what reason points out as a proper rule."

Talkativeness on the part of the wife was among the justifiable causes for divorce. If, as some people suppose, the punishments of the other world bear some relation to the errors of this, may it not be that the spirit of this long-departed reformer is compelled to be one of the invisible throng who wait upon the lectures of Mrs. Stanton, Miss Anthony, and others of that ilk? What repentings he must experience, what fearful self-reproach! The very corner-stone of the system of Confucius was obedience to properly constituted authority. The will of the parent was supreme; while life lasted, the child was subject to it, no matter what age was reached. Then, by parity of reasoning, as was the father to the family, so was the emperor to the nation: the same obedience that was due from the son to the father was due from all the people to the emperor; he is their father, and they are his children. In this submission, this habit of obedience, is the secret of the stability of the government, and the long continuance of the empire.

Such are the people that come to the Pacific coast, and such are the formulas which have molded their characters, and by which they have been governed. Obedience and fidelity are the two leading traits of the Chinaman at home.

"They touch our country, and—"

do their characters change?

R. W. Raymond, United States commissioner on mining statistics, etc., in an official report says: "The Chinese put but little faith in the promises of employers, and are apt to stop if not promptly paid. They are the most reasonable in the matter of wages, and the most unreasonably exact, in the matter of payment, of all our laborers. Chinese skilled miners are quite equal to those of any other race. In some instances they surpass white men employed in the same mines. The greatest superiority of good Chinese miners over European miners is their fidelity. It is certainly true that they are far more earnest and faithful than any other miners. In every department they enjoy the universal reputation of conscientious fidelity. Apart from every other advantage or disadvantage attendant upon their employment, apart from the discrepancy of wages even, this one attribute of fidelity to the interests of the employer will certainly carry the day for the almond-eyed laborers, if our white workmen do not recognize the danger in which they stand, and avert it by more sensible means than they have yet used."

Upon this one point of fidelity to instructions the testimony among employers was quite uniform, no matter what differences of opinion there might be in regard to other matters. The stories with which we have been entertained

in regard to Chinamen copying even the imperfections and blemishes in a model, such as putting a patch on the elbow of a new coat because there was one on the old one, but illustrate this characteristic. Their work must be exactly like the prototype which is placed before them.

A pleasant-voiced, nice-looking Chinaman was employed as chambermaid (if the solecism may be permitted), in one of the beautiful homes in Oakland. He belonged to quite a retinue of servants, a half-dozen or more, and was the only Asiatic. The others were all Europeans, and trained for the particular department in which he or she was employed. But it was the testimony of the lady of the house that none of the others at all equaled the almond-eyed chambermaid in the faithfulness and perfection of the service performed. After once becoming familiar with the routine of his duties he needed no oversight or attention. On the day that the drawing-room was to be swept and garnished he did it, and did it so perfectly that the most exacting requirement was fully met. And so of the parlor, the library and the bed-chambers. He was never idle, never absent, never forgetful. Whoever else might be away from his post, he was always at his — "Faithful found among the faithless."

It was the testimony of the owner of a fruit ranch who had for a dozen years or more employed from six to fifteen Chinamen constantly, that he would not have any other laborers, for when he told a Chinaman to do a thing he knew that it would be done, and done exactly as he directed — an assurance that he would not feel in regard to any other laborers.

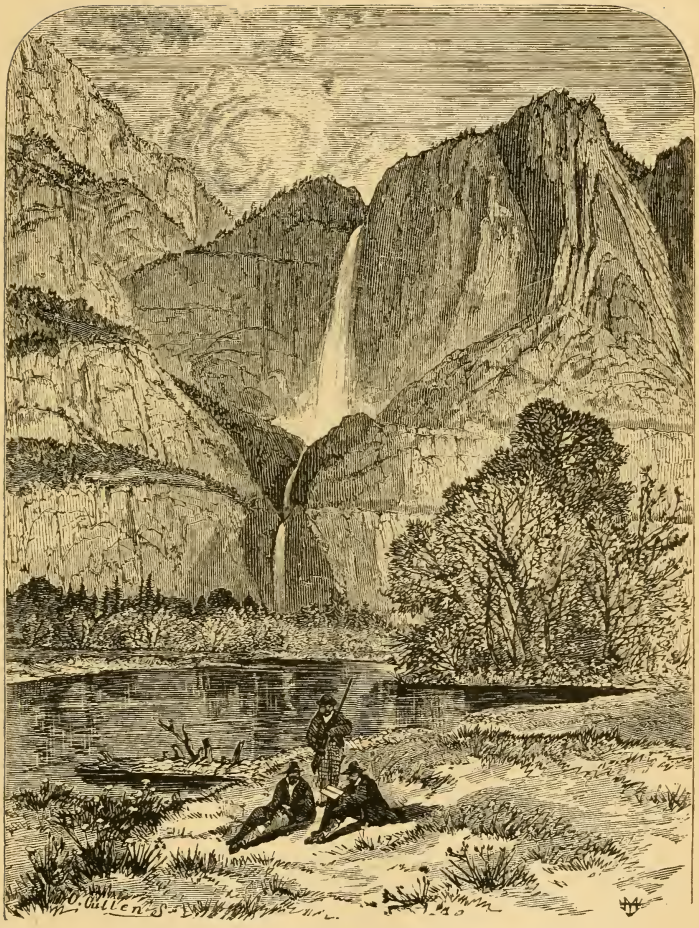
This characteristic of faithfulness extends to and in-

cludes all contracts and bargains. The Chinese merchants in San Francisco import thirty million dollars' worth of goods annually. This large business is conducted uniformly upon such correct business principles, with such regard to promptness in meeting liabilities, and attention to all the terms and conditions of contracts, that the credit of no class of business men in that city stands higher, if so high. They have not yet learned to be bankrupt and yet rich, and so to put themselves before the eyes of the law as to have nothing and still seem to possess all things that they need.

A man who has lived more than twenty years in California, and had to do with Chinamen in almost every capacity, as laborers, as renters, as transactors of business generally, declared that he had never yet lost a dollar by a Chinaman. When a Chinaman engaged to do a thing, or to pay a price, there need be no anxiety — he would surely do it.

That he is not a specialist and confined to one thing or kind of labor is proved by the fact that in a multitude of families a Chinaman is the factotum — the maid-of-all-work. He bakes and broils, he sweeps and dusts, he washes and irons, and does the multitude of things required of a servant where but a single one is employed. Although often serving as cook even in hotels, the evidence acquired on the subject is not sufficient to convince at least one observer that in this department John excels. Only in a single case was there seen any proof of unusual tact or uncommon skill.

In the year 1870 it was estimated that one hundred and forty thousand Chinamen had come to the Pacific



THE YOSEMITE FALLS. Pages 214, 221 and 222.

coast, and of these ninety-five thousand remained. And still they come. In 1875 eighteen thousand arrived, the largest number that ever came in a single year.

There are six Chinese companies in San Francisco, each having its own organization, its own officers, and its own place of meeting. These are in some sense mutual aid societies. Chinamen can do as they please about joining them, but so great are the advantages of doing so that almost every one connects himself with one or another. The initiation fee is from five to ten dollars. There are some incidental expenses, so that the entire cost of membership for ten years is from fifty to one hundred dollars. A member may dissolve his connection with the company to which he belongs at his pleasure. In return for what the member pays, the company take care of him if sick, rescue him, if possible, when in danger, and feed him when he is out of employment. No matter where he goes, or how far away, his company is still bound to care for him. If he is oppressed or wronged in any way, and makes complaint, he must be looked after and his wrongs righted. When a member wishes to return to China, a certain number of days before he expects to start he must report himself to the company to which he belongs and state his intention. The books of the company are searched to see if he owes any man anything; notice is also sent to the other companies to learn if there is anything against him on their records, and he must have a clearance before he can leave the country. It is the custom, therefore, if a Chinaman owes a debt, and there is any difficulty in collecting it, to send notice to the company of which he is a member, who see

that he pays it, at least before he leaves the State. Each company has a hospital for the benefit of its members, and some of them have temples for religious service.

The Chinese have many festivals and holidays; but it is extremely difficult to find out what day they celebrate, or why it is observed. There are very few who understand English well enough to make explanations. When asked about the nature of a holiday, the almost uniform answer is, "All the same as 'Melican man's Fourth of July." Fourth of July seems to stand to them as a generic term for holiday. But when their new year begins, there is no trouble in ascertaining what they are about, or why they eat and are merry. This is the chief of their holidays, and is celebrated with much parade and rejoicing. Their new year is a week in beginning, and sometimes extends over ten days. Like Easter, it is a movable festival, and, also like Easter, its commencement depends upon a certain conjunction of the sun and moon. The Chinese new year begins with the first new moon after the sun enters the sign of Aquarius, and may come at any time between the twenty-first of January and the eighteenth of February. The beginning of the new year is a grand event, and is prepared for with great industry and parade. Some of the customs connected with this season would bear transplanting, and would work no detriment to those who claim a higher style of civilization. Business men overhaul their books and close up all accounts; no debts can go over and stand upon the records of the new year. Great effort is made among debtors to pay up; but if it is found to be impossible, the debt is cancelled and the debtor goes free. But his credit is gone, and for the

future he is a dishonored man. Nothing can wipe out his disgrace but the honorable payment of the debt after he is no longer liable for it. Everything, also, is put into a state of perfect cleanliness. Houses are scrubbed and put into the best possible order; all garments are made as clean and pure as soap and water, with a liberal expenditure of muscular power, can make them. It is a time of suffering and death among pigs and poultry, for to these two orders of land animals Chinamen confine their attention. They have much affection for fish, and freely indulge their taste for them. All work is given up, and a general carnival prevails. So far as outside show is concerned, the jollification consists mainly in the explosion of fire-crackers. The authorities of San Francisco tried to confine this performance to a single day; but although there is more of it done on the first day than any time afterward, the practice is continued through the whole series of days. The usual economy of the Chinese seems to be thrown to the winds on this festive occasion. They go up into the verandahs and upper stories of their houses, and after igniting the crackers throw down bunch after bunch, which explode on the pavement below, and keep up such frequent detonations that the effect is like that of a constant discharge of artillery. By the time night comes the pavement will be soft to the feet, from the abundance of the fragments of the exploded fire-crackers, and the feeling is like that of walking on feathers. Men who do business to the amount of many thousands of dollars engage with apparent zest in this, to us, childish amusement. Of course this fire-cracker

burning is confined to the parts of the city especially appropriated to the Chinese.

The Chinese theatres are in full blast all through the holidays. The doors are opened at seven o'clock in the morning, and the play begins soon after. An intermission at noon gives time for dinner; after which the play is resumed, and with the exception of a couple of hours — from five to seven o'clock in the evening — it is continued until eleven. It does not seem to be considered essential to hear the whole play; but the spectators come and go to suit their convenience, apparently well satisfied with the snatches they get in that way. During these holidays the Chinese women are allowed the privilege of attending the theatre. The gallery is reserved for them, where they sit entirely separate from the men. They do not, however, take any part in the performance. The roles which should be taken by women are assumed by men. The dress is very gorgeous, and is said to be after the cut and fashion in use in China before the country was conquered by the present reigning sovereigns, the Mantchoo Tartars. This conquest took place two hundred years ago, and at that time the people were compelled by the conquerors to assume their present costume, including the shaving of the head, except the part on the top, which furnishes the hair for the long cue, which they still so universally wear.

The Chinese have not advanced beyond the ruder stages of the "mimic art." They borrow no aid from scenery, and have no division into acts and scenes. When a play once begins, it keeps right on to the bitter-off end. There are no curtains, which involves the necessity of doing

whatever is done openly — in the very face and eyes of the audience. A man is killed in a combat, or is decapitated in obedience to an official sentence. The poor defunct lies dead upon the stage until he gets tired of his deadness, when he gets up and deliberately walks off, without even having the grace to carry his head in his hand.

But of the appointments of a Chinese theatre, the music is what lingers longest in the memory. The orchestra consists of a row of men, who sit on the stage back of the performers. Each one is armed and equipped with the instrument that will make the greatest possible noise. Gongs, cymbals, and many strange instruments with unknown names, but of wonderful capacity, make up the collection. The efforts of the performers are never intermitted. When the stage-actors wax warm, and show their excitement by increased loudness of tone and more exaggerated action, the sympathy of the musicians is exhibited by intensified effort; the gongs thunder, the cymbals reverberate, and all the instruments seem to do their best to outdo any Pandemonium of which the most imaginative ever dreamed. If one can go to a Chinese theatre and not have his ears tingle for a week after, he must have put his nerves to sleep beforehand with some powerful anodyne. Yet go by all means. There is nothing in the Chinese quarter in San Francisco that pays so well.

The temples, also, are places much resorted to during these holidays. Of these there are several in San Francisco, but one outshines all the others in the number of its gods and the grandeur of its appointments. All are Bud-

dhist temples, Buddhism being the religion of the common people, to which class the Chinese who come to this country generally belong. The most noted temple was fitted up by Dr. Li-po-tai, a distinguished physician in San Francisco, with the aid of other rich Chinamen. The Chinese show the same disregard to show and outside appearances here that they are said to at home. These temples are in alleys that are absolutely frightful in the character of their buildings and the people. The best temple is in the third story of a brick building, to which access is gained by an outside, rickety stairs, that shakes under the tread. There are numerous gods and goddesses in the temple, some fourteen or fifteen in all in the different apartments. In one corner of the room first entered a gong is placed, over which a bell is suspended. Near these is an oven in which prayers and gifts are burned, or rather the representatives of prayers and gifts printed on paper, and bought of a priest who has a room near by. As these papers are lighted and put into the oven, the gong is struck and the bell rung to call the attention of the spirits who are to receive them to the offerings made.

The Chinese gods and goddesses were all once living persons who performed some worthy deed for which they have been deified. In the main room of the temple there are three gods, life size, sitting behind an altar. The central one is Joss, the supreme deity. The one on his left is the god of war, the special patron of the Ning Yung company, one of the six companies already described. His name is Rwau Tae. He lived about sixteen hundred years ago, and his history shows that the Chinese have both the power to do and appreciate what is generous and noble.

Rwau Tae was a soldier and a commander in early life, and was almost always victorious when engaged in battle. He was also kind and merciful, as well as brave, and conquered the hearts of his enemies by love and kindness after he had conquered them in war. When the strife was over he resigned his command. The Emperor was his personal friend, and importuned him to accept civil office, but Rwau Tae refused. He joined the order of Devoted Brothers, whose business it was to tend the sick, to heal the wounded, and to succor the distressed. In a few years a rebellion broke out in the empire, and like another Cincinnatus, Rwau Tae was called from his retirement to command the army of the empire and save the country. He succeeded in suppressing the rebellion, the rebels were defeated, but the leader escaped and a large price was offered to any one who would bring him dead or alive to the Emperor. All subjects were also forbidden to harbor or help him in any way.

Rwau Tae returned to the brotherhood and again devoted himself to works of mercy and charity. One day there came to him a poor man, who was sick, wounded, ragged, and in need of all things. Rwau Tae recognized in him the leader of the rebellion, but feeling that the claim of humanity was superior even to the command of the Emperor, he took him in and healed his wounds, relieved his distresses, and, when he had fully recovered, sent him on his way with the means to supply his future wants. Then he put his own affairs in order, arranged his property and estates, went and confessed his disobedience to the Emperor, gave himself up to suffer the penalty of the violated law, and was beheaded. But while the Emperor would not suffer

a broken law to go unavenged, he could appreciate the fine humanity of the man and his honorable regard for his duty as a subject. He, therefore, ordered his name to be added to the nation's list of deified heroes, and he has ever since been worshiped as a god.

The goddess of mercy is in another room in the temple above mentioned. This image was brought from China three or four years ago, by Dr. Li-po-tai, at a cost of eight thousand dollars. The story about her is this: She was a fine young woman, who, to escape a disagreeable marriage, left her father's home and took refuge in the house of a religious sisterhood. Her father burned the buildings, but her prayers saved the occupants. She has it for her benevolent mission in the other world to look after the souls of those who have no friends here, or who have friends that are unmindful and negligent.

This goddess is arrayed quite gorgeously, and has diamonds in her eyes for pupils, and a diamond in the center of her forehead. She is very popular among the Chinese and has many supplications made before her.

In one corner of a remote room in the temple there stands the most cadaverous, woe-begone, forsaken-looking being that could possibly be imagined. It is a man who has lost his soul! He brought this calamity on himself by some misdoing in this life. He is constantly in pursuit of this lost soul, and sometimes is just on the eve of grasping it when it eludes him, and he still goes on in the restless search.

There is no stated hour for worship in the temple. The Chinamen come in at their pleasure or convenience, and go the rounds of the gods and goddesses, joining their hands

ALLEY IN CHINESE QUARTER, SAN FRANCISCO. PAGE 192.

in front and bowing three times before each. Incense sticks are constantly burning, and the air is loaded with perfume. Colored candles, sometimes a yard or more in length, are burned before the idols. These are the offerings of different individuals.

CHAPTER XIV.

A TRIP TO THE YOSEMITE.

THE Yosemite valley is in a straight line about one hundred and fifty miles from San Francisco. The direction is a little south of east; by any road that can be traveled the distance is about two hundred and fifty miles. It is near the center of the State, taking it lengthwise, and near the center of the Sierra Nevada range of mountains, taking it from east to west. The range in this place is about seventy miles wide.

We, a party of nine, took our seats in the cars, at the end of the ferry across the bay from San Francisco, on the afternoon of a June day, when June days are longest. Modisto was the terminus of the railroad, and we spent the night there, and took the stage at five o'clock the next morning. We had our first look at the Tuolumne river just after starting.

All the morning our road was through the San Joaquin valley. A more dreary, desolate, forsaken-looking region cannot well be conceived. One of the most fertile and fruitful parts of the State when blessed with a plentiful supply of water, it now, in consequence of excessive drouth, seemed to have the very pith and marrow dried out of it. When we came to Snelling, on the Merced, we looked eagerly at the river. It was our first chance to see this "river of Mercy." It was running along quite demurely on its way to find the San Joaquin, and seemed altogether

unconscious of the wonderful interest it excited further up and nearer its source.

After passing through Bear Valley we entered upon the celebrated Mariposa tract and crossed it diagonally. Everywhere there were signs of gold-digging, which makes sad havoc with a country, whether looked at from an æsthetic or agricultural point of view.

This Mariposa grant originally comprised seventy square miles, and at one time was said to make John C. Fremont the richest private citizen in the world. The lawyers have probably reaped the greater part of the golden harvest it has produced. Litigation in regard to it has been constant and continued for many years.

As the day wore on we had more interest in the way of scenery. There were valleys with oaks and pines scattered here and there, and hills the sides of which were covered with *chaparral*, or "devil's acres," as it is somewhat profanely called. *Chaparral* is a generic term used somewhat in the sense of thicket. A *chaparral* is generally made up of bushes of various species, such as the California lilac, grease-wood and other shrubs.

It was ten o'clock when we reached White and Hatch's. Pleasant haven of rest! The blessing of many a weary traveler has been bestowed upon this house, in consideration of the comfort and refreshment enjoyed within its walls. How clean and cool everything looked! Were there ever beds so restful! It was worth while to be so tired in order to know the blessedness of repose so delightful.

In the morning we had a chance to appreciate the sylvan beauty of the place. There was a hill near, on

which were huge rocks overgrown with moss. There were dark pines and fir trees on every side, which seemed to emulate each other in trying which could reach its head nearest to heaven. The sky wore a much more benign look than it did the previous morning. Why should it not? We were lifted three thousand feet above the fogs and miasmas that infest the face of mother earth.

At eight o'clock in the morning we started for Clark's. The trees on every side as we went our way were of grand size and proportions. They quite cast into the shade those we had seen and admired the day before. We continued to ascend until we were twenty-eight hundred feet above White and Hatch's, and more than a mile above the level of the sea. We were certainly on the road to an apotheosis. But we were not to take our seats among the gods yet. After crossing the divide between the Chowchilla and the south fork of the Merced we began to descend, and before we reached Clark's had gone down seventeen hundred feet. At Clark's we were on the same level with the Yosemite valley, four thousand feet above sea-level, and only twelve miles in a direct line from the goal of our hopes. Had we the wings of a dove we could have flown there by making just that distance. As we had not we were obliged to ride twenty-four miles, and go up and again down in order to reach the place. The first ceremony at the end of each ride was to be swept down. Somebody, broom in hand, was always in waiting to make free again the soil that had settled upon our garments. Clark's is a very comfortable place, where pleasant rest may be enjoyed. We stayed over a day here in order to visit the big-trees.

When the news of the wonderful big-trees of Califor-

GENERAL VIEW OF THE YOSEMITE.

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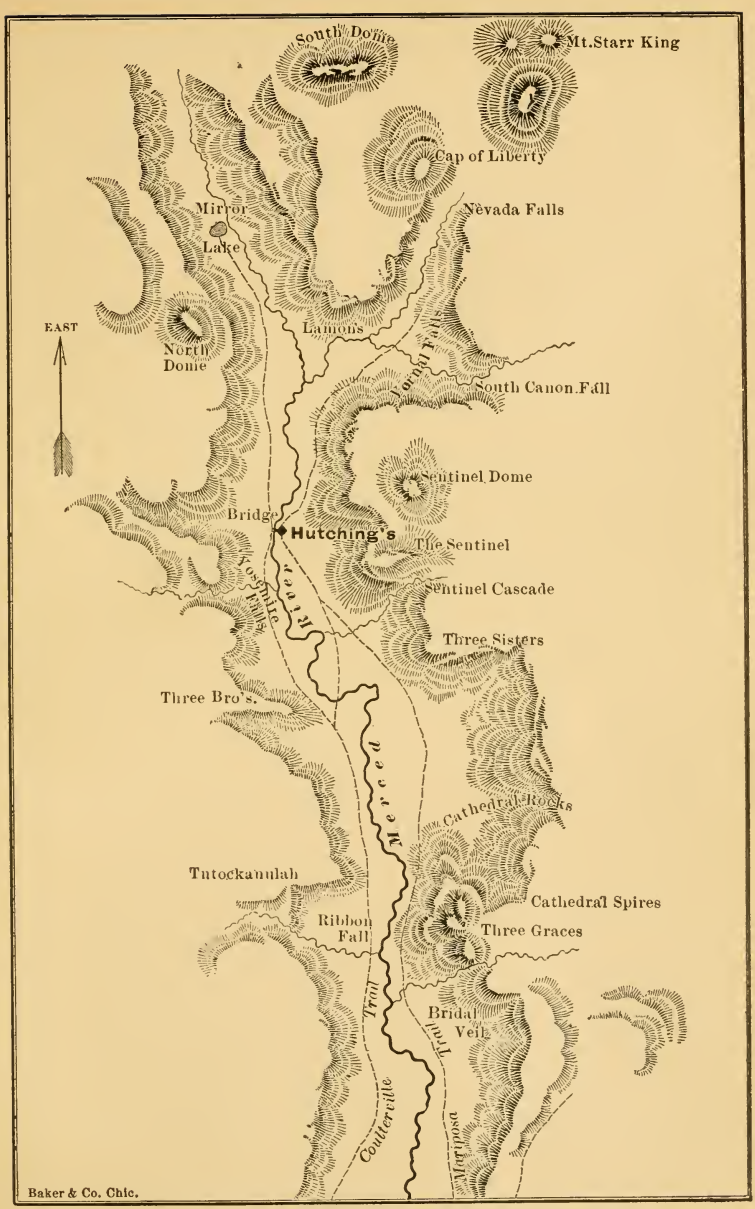
nia reached England, the botanists who investigated the matter decided that they were *sui generis*—not belonging to any known genus. Therefore, without a very nice appreciation of the claims of the country that produced them, they bestowed upon them a name derived from that of the "Iron Duke"—Wellingtonia. Subsequent examination proved them to be so like the already known redwood as to have a legal right to be included in the same genus. The specific name *gigantea* was added, and the name stands *Sequoia gigantea*. The age of these trees would seem sometimes to have been greatly overestimated. One of the largest and apparently oldest in the Calaveras grove was cut down and the concentric layers counted, by which it was proved to be thirteen hundred years old. The height is not so great as that of some of the eucalyptus trees in Australia, which often reach the altitude of four hundred feet, and one of which is reported to measure four hundred and eighty. The tallest of the big-trees which has yet been measured in the Calaveras grove, the Keystone State, is only three hundred and twenty-five feet high. But, taking height and thickness both into consideration, no tree has ever been known to equal the big-trees. They are always found in groves, but they are not exclusive—they allow other species to grow among them. Pines, spruce and cedars seem to feel no embarrassment at being found in the company of their betters, to which they in fact serve as a foil to set them off and show how much bigger they are than common trees. The *Sequoia gigantea* has as yet always been found within two degrees of latitude thirty-six and thirty-eight north, and at an elevation of from six to seven thousand feet

above the level of the sea. There are three groves north of the Mariposa, and four south of it. The Mariposa grove was discovered in 1857 by Mr. Clark. There are about six hundred trees in the grove, or groves, for it is in two divisions. There are trees in the Calaveras grove that exceed any in this in height, but in diameter some in the Mariposa carry off the palm. The Mariposa grove alone belongs to the State of California. The grant comprises a tract two miles square, and was given by the United States Government to the State; this, "together with the Yosemite valley, with its branches and spurs, an estimated length of fifteen miles, and in average width one mile back from the edge of the precipice on each side of the valley, with the stipulation, nevertheless, that the State shall accept this grant on the express condition that the premises shall be held for public use and recreation, and shall be inalienable for all time."

So much in the way of preliminaries and elucidation of matters in general. Through the greater we come to the less and reach the account of our own particular experiences and impressions. After reaching Clark's we were to say good-bye to wheels and trust ourselves to the tender mercies of horses, holding the reins of government in our own hands, though in my case they proved to be rather the symbol of power than the real thing. As soon as breakfast was over the horses were brought out, and we prepared to mount. This was a trying time to me. It was the one particular event that had been before me as a dread and an uncertainty ever since the journey was decided upon. I had bespoken a gentle horse. When my turn came to mount, a smooth brown mustang was brought

up and formally introduced as "Alek." He belonged to that class of sovereigns for whom one name is sufficient. In a few minutes the impossible was accomplished; I was fairly mounted. Whether I could maintain the eminent position assumed was the problem which the future was to solve. By holding on to the "horn" with an intensity that knew no relaxation I remained seated when Alek started, and we at once took the place which henceforth knew us in all our journeyings,—in the rear. Alek was determined to let his moderation be known, and we were in danger of either retarding the progress of some gentlemen benevolently inclined, or being left quite to ourselves in the background. I could not spare enough energy from the continued effort to "hold on" to give him any persuasive touches of the whip, and he seemed intuitively to divine the true state of the case. It was a rarely beautiful morning; the sun was clear and bright, and would have been too warm had we not been shaded by the trees that overhung the trail. We were above all fogs and miasmas, and breathed a most exhilarating atmosphere, which of itself would have sent hope and delight tingling through the veins. Our way led us up higher and higher until we were more than a mile above the level of the sea, and then we found the Big Trees! We entered the upper grove, and on the west side. Our first halt was made when we reached the Prostrate Monarch. The first feeling upon seeing the trees was that of disappointment; but when we had clambered up the side of this prostrate monarch and found ourselves standing thirty feet in the air, higher than the eaves of most two-story houses, while the tree lay flat upon the ground, we began to think that

the Titans had left their representatives behind them, and that the trees had not been overestimated. The bark is tan color, and from fifteen to twenty inches in thickness. It is of a loose, spongy texture, and when cut transversely is used sometimes for pin-cushions. There was pain always mingled with wonder and pleasure in looking at these monsters, for not one of them all is perfect. The fire has scathed them and more or less injured their appearance. This was done before the groves were known to white men. The Indians were accustomed to kindle fires in order to burn the underbrush, and so facilitate their hunting operations. It is a sad pity that they are so marred. We found a spring at the very roots of one of the largest trees, and the water was deliciously cool and refreshing. We spread our lunch near by, and ate under the shadow and protection of one of these great kings of the forest. Like most of the coniferous trees on the Pacific coast, the big-tree sends out no branches for a great distance from the ground — sometimes one hundred feet or more. The tops of many of them were broken off, showing that decay had already begun. There was something almost fearful in the stillness that reigned in the grove. No note of bird or hum of insect was heard. The silence was as profound as that when the primeval earth, all dressed in beauty and arrayed in glory, waited in silent expectancy the coming of its lord — the creation of man! Our guide was a backwoodsman, accustomed to roaming the forests and camping out for weeks in the wilderness; but he said he would rather stay alone through the night anywhere he had ever been than in one of these groves. There was something awful in the solitude. Oc-



PLAN OF THE YOSEMITE VALLEY. PAGE 215.

casionally, when a breeze suddenly woke up, there would be heard a sighing among the pines, and the big-trees with their hoarser wail would supply the bass, and make such a chorus as the ear might listen for in vain anywhere else in the world.

After lunch we mounted our horses and started for the other grove. On our way we rode from end to end through the trunk of a tree, that had been burned out and was lying on the ground. Through another, that was standing and had also been burned out, we rode in regular procession. The Grizzly Giant outranks all others in the grove in magnificent proportions. It is ninety-three feet seven inches in circumference, and sends out a branch ninety feet from the ground that is six feet in diameter. This tree is, like the rest, much injured by fire. There were ten of us in the company. We arranged ourselves around the Grizzly Giant, sitting on our horses and bringing them head and tail together as closely as we could, and thus we reached about half way round the tree. The Queen of the Forest is less injured by fire than most of the other trees, and is great and grand enough to deserve the name it bears.

The trees seemed to grow in size every hour that we spent in looking at them. The first disappointment soon gave place to wonder that increased constantly. Before we came away, they by their actual presence surpassed all expectation or imagination. There are no words that can worthily describe them; for before they came in view there was a want of language to express the feelings of awe, of wonder, of might and majesty that were awakened.

The wood is of a color like our eastern cedar, though

somewhat lighter. It is inodorous, at least when dry, and is said to be very durable. In the groves further south the young trees are cut, taken to the mills and sawn into boards. The Mariposa grove is protected by a very watchful guardianship. Our guide did not dare so much as peel off a piece of bark, being forbidden by his oath of office; but one of the men with us had no such impediment in his way, and helped us to wood and bark. Mr. Clark is the guardian appointed by the State to take care of the grove, and also of the Yosemite valley. Other men, called commissioners, are united with him, but he is the acting quorum.

The sun had gone far on its way toward the west when we set out on our return. What a day it had been! What new sensations had been awakened! What surprise, what wonder, what admiration! A new element had come into our lives, to be separated from them again nevermore. Here we first saw the wonderful snow-plant. This beautiful thing does not derive its name from its color, for that is in strong contrast to white, but from the fact that it pushes its way up through the snow, as though that was its native element. The whole plant is a bright red — not flame color, not blood color, but sometimes one and sometimes both. It is veined and shaded in its hue; it grows from eight to twelve inches high, and, like the goddess who burst upon the world full-armed, it comes up out of the ground equipped and perfect. The growing seems to be all done in the secret places of the earth, before it exposes itself to view. First the head or top pushes up and presents itself; then it keeps on rising, rising, till it stands up erect, a full-grown plant. The

little florets are arranged around the stalk like the flowers on mullein. When it first appears above the ground there is a long, narrow leaf, which is also red, wrapped carefully around each floret, to protect it while pushing its way up into the free air. This official duty done, the leaf twists itself about the stalk so as not to obscure the beauty of the flower and let it have a fair chance to be seen. This was the most curious plant that we saw during our trip. It seemed to grow abundantly all around the valley of the Yosemite, but we found none in it. At Peregoy's a dozen could be found under a single pine tree. The botanical name of the plant is *Sarcodes sanguinea.*

At eight o'clock the next morning we again mounted our horses. A ride of twenty-five miles would bring us to the Yosemite. Mentally, I was in a better condition than at starting on the previous day; because of the facility with which the mind becomes accustomed to danger, I could trust myself in my perilous position on the back of the horse with diminished trepidation and alarm. But physically! Ah, well! what boots it to tell of the wounds and bruises? Alek seemed by this time to have clear and settled convictions in regard to his rider. That I had not much will of my own was self-evident to him, and that I did not dare assert what little I had in the face of opposition was equally apparent. These first impressions were not effaced throughout all the ten days that we afterward journeyed together. Another conviction was equally well fastened upon Alek's mind. He was conscious of having the advantage on the score of that practical knowledge which was necessary for the

emergencies to come. I went over to his opinion before we had been fellow-travelers very long.

We — that is, Alek and I — always guarded the rear of the party, to see that no evil came upon them from behind. It is only another proof that good deeds are not always recognized and rewarded, that our services in this respect were not appreciated, or, if they were, it was with the silent thankfulness with which the earth receives rain from the clouds. There was nothing said about it!

There was no great exuberance of spirit in starting, such as there had been the day before. The damaging effects of the fifteen miles' ride of the previous day were rather sedative in their influence, at least so far as the spirits were concerned. We crossed the south fork of the Merced just after leaving Clark's. It is quite a respectable little river there. Then we took our winding way up the hill. Our party had gained three by accretion, so that with our guide and pack-mule we made quite a cavalcade. This pack-mule was a real character in his way, and deserves from a veracious historian more particular mention. He was a dumpy little fellow, compactly built and well put together. His strength must have been great in proportion to his size, for on his diminutive body was packed all the luggage that belonged to our party of twelve. To be sure, there were no Saratoga trunks, but there were in the company four ladies fully equipped for a trip of ten days.

The name of this enterprising mule was "Jocko." How he would grunt as bag after bag, satchel after satchel, was brought out and placed upon his back! The girth was with each parcel drawn more and more tightly. Such

long breaths as he would draw while the process was going on, as though he felt doubtful whether he should ever have another chance to inflate his lungs. But Jocko was very much of a philosopher, and submitted to the inevitable, when fairly proved inevitable, with great resignation. When he was once loaded, and matters were settled so that he knew what to depend upon, he accepted his burden and set off as briskly, and apparently in as good spirits, as though he were starting on a long-desired pleasure trip. He gave evidence of taste and cultivation in the course of the journey. Like the rest of us, he sometimes grew tired, his spirits flagged, and his steps became slow. But if the voice of our sweet singer was heard, charming us with some melody, Jocko pricked up his ears and started on with new life and courage, as much as to say: "If you would have a mule carry a pack and travel with ease and diligence, you must do something to keep up his spirits." He had judgment, too, and a mind of his own, as mules generally do.

On one occasion during the journey he chanced to be about midway in the procession. There was a narrow place in the trail, with large rocks on each side, through which those that were before Jocko passed without trouble. When he came to the narrow pass he made up his mind that there was not sufficient room for him, with his pack extending on each side like very substantial wings. So he stopped, and, putting on a most determined look, said, as plainly as he could, "You'll not get me through there till you have taken my pack off." He did not mean to jeopardize what was intrusted to him. Like all noble natures, he felt bound to be faithful to a trust.

The guide tried in vain to make him go through. Even the logic of blows was not sufficient to persuade him to make the attempt. It took the united strength of two or three of the party to conquer his will and get him through the pass.

On we went in single file, winding our way up the hill — up — up. Still up our way led us, till we were on the divide between the South Fork and the main Merced river, seven thousand feet above the level of the sea. There we found only the tamarack and the noble fir, which grow nearer to heaven than any other trees. We had our pay as we went along for the fatigue we endured. What we saw and heard by the way would have been sufficient compensation had there been nothing beyond. We looked out over an apparently endless range of mountains. They stretched away off as far as the eye could reach, and the air was so clear and pure that the view seemed almost boundless. Range upon range, mountain upon mountain, rose up to point the thoughts heavenward, and everywhere they were covered with trees whose majesty and magnificence made the sight rarely beautiful. The sighing of the wind in the tops of the pine trees was something that affected me strangely. It stirred up all there was within me that was good and gracious, and made me wish to fall further and further in the rear, so as to be all alone, with "God o'erhead." I should never weary of this "harp of a thousand strings," played by an unseen hand, that knows so well how to touch it. Oftentimes there was a sort of refrain. The tune would be started on one hill-top, and the sound would spread and deepen and widen until all the trees on all the mountains joined in the chorus, and there

went up to heaven a universal anthem, harmonious and grand. There was room in my heart for only one regret — that I could not stop and look and listen till I was satisfied. I must hurry on or I should be left too far behind. At twelve o'clock we reached Peregoy's, the half-way house, and were fifteen hundred feet above the Yosemite valley. "Peregoy's" is a name that falls pleasantly on the ears of travelers to the Yosemite. Is it shockingly low and material to commend a place because you find nice things to eat there? Should pilgrims, on their way to worship at the shrine of the grand and the beautiful, stop and rejoice in cream pies and juicy steaks? There is a carnal body as well as a spiritual, and while we are of the earth we must be earthy enough to feed the bodies that would perish without eating; and if we must feed them, what harm in desiring the best to do it with?

The mountain-air, riding and the strangeness of the conditions wake up the servants of digestion and make them very clamorous. All sluggishness is gone. The office of food is magnified. Eating is an important fact. This is understood and provided for at Peregoy's. There is no style, there are no printed bills of fare or change of cloth at dinner, but everything is good and enjoyable. There never were such steaks and such mutton-chops; and as for the cream pies and wonderful cakes, they would be fit company for the nectar of the gods at the feasts in Olympus. The name of Peregoy lingers pleasantly in the ears of travelers. May the genius that presides over that kitchen feel the richness that comes from being blessed by thousands, who are made stronger and happier by the ministrations of her hands!

The air is so pure at this point, and so free from any corrupting influences, that meat can be kept ten or twelve days without any application of salt. But there was no chance to try any such experiment while we were there; we helped put all provisions beyond a peradventure as to their future. It was the original intention of our party to go no further than Peregoy's the day we left Clark's. But after dinner and a rest of three hours we were so much refreshed that there was a unanimous vote to go on and get into the valley the same night, and be there ready to celebrate our national birthday on the morrow. So we started on quite cheerfully and courageously. We had twelve miles before us, and to those of us who were unaccustomed to the saddle it was a large addition to make to the twelve already traveled. We went on still ascending till we were seven thousand four hundred feet above the ocean, more than three thousand above Clark's. In many places the trail led up the mountain as nearly perpendicularly as earth would stay; then it was rocky and rough, which seemed to add to the danger as well as the toilsomeness of the ascent. Something was gained by making the trail zig-zag, like a Virginia fence. I was interested in watching Alek, and seeing how thorough was his knowledge of the laws of gravitation and equipoise.

He would go to the very farthest verge of the angle, so that his head and almost his entire body sometimes would project beyond the path; then, making a fulcrum of his hind legs, he would turn himself with gravity and deliberation, go on to the next angle, and so repeat the process. At first, not having learned to confide entirely

in his wisdom and judgment, I pulled the rein to prevent his going out of the track, as I thought he intended. He never paid the slightest attention to my efforts, and I soon concluded it was better to content myself with being a shadow behind the throne and give up all power and authority to him, devoting myself with a single eye to the one business of keeping myself on his back. To this determination I adhered ever after. The appearance of the party was often very picturesque, viewed from the rear, which was always my standpoint of observation. The whole party wound their way up the hill one after another, some on one level and others on a higher, the different hues of the costumes distinguishing each from the other as they were now lost to sight and then appearing again, like the pieces in a kaleidoscope. The zig-zag of the trail increased the effect and strengthened the appeal to the imagination, making it easy to set one's self back in the stream of time to an era which antedates the birth of railroads and coaches, when brave knights went to the rescue of fair ladies, on gallant steeds, with spear and breastplate. Sometimes a song would be started, and one after another would join in until the chorus was swelled by the voices of all the company. The tones lingered in the valleys and were echoed by the hills, until Nature herself took up the refrain and seemed to complete the harmony. Brave little Jocko usually took precedence, as though the superior value of his cargo entitled him to that distinction. So we went on, rather flagging as the day advanced, till we came to Inspiration Point, where we were to have our first view of the remarkable place we had come so

far to see. As we neared the spot, silence fell upon the party — all were busy with their own thoughts. Faith was soon to be turned into sight. With our own eyes we should soon verify what had been told us of this wonderful valley, like which there was said to be no other. That supreme moment, desired so long, hoped for through years, was near at hand. Then there was, after all, a vague uncertainty as to what the sight would be to us individually. Would our hopes or our fears be realized? The veil would soon be lifted, and we should know for ourselves — no longer see through the eyes of others. We dismounted at a little distance, and were soon on the edge of the precipice. There it was — this trough hewn out of the mountains. Awe-struck I stood, mute, and almost immovable. I should have been glad to be all alone in this first interview with God manifest in so wonderful a way. The whole valley lay spread out like a map beneath us. El Capitan stood out most prominently, for it was exactly before us. The Half Dome also arrested attention whenever we looked toward the upper end of the valley. We did not know until afterwards all the different points. It was the grand whole that bewildered and overwhelmed us. Whatever of majesty that is made up of imaginable strength and massiveness was there. Whatever of sublimity, inconceivable height and unsounded depth can give was there.

But the sun was nearing the western horizon. We could not satisfy ourselves with looking, for we were yet six miles from our place of rest. Not six ordinary miles. One would have very little idea of distance in and about

the Yosemite who did not go beyond the common notions of miles and measures. Like everything else, the miles are on a scale of magnificence that dwarfs all common conceptions.

We began the descent of the mountain after leaving Inspiration Point. We had been climbing up nearly all the way from Clark's only to be obliged to descend again. The grade from the top of the mountain down into the valley was much steeper than any we had previously had. It did not seem possible for the rider to keep the center of gravity within the compass of the horse's ears. There was constant expectation of being required to describe a tangent or a parabola in falling over his head. These mustangs are wonderfully wise and skillful in their day and generation, and possess remarkable presence of mind into the bargain. Others might be thrown off their balance, but not they. They always know exactly where to put their feet and how to carry not only themselves but their riders. The sun had disappeared from the heavens and the moon taken its place when we reached the foot of the mountain and entered the valley; so we had our first near view under the witchery of moonlight. But alas for poetic phantasy! I was so tired that all power of emotion was gone. As soon as we reached the hotel I deposited myself upon the bed, supperless, and suffering in every joint and limb. Did ever sinews so ache or muscles feel such soreness? The very bones seemed to have found a way to make their grievances felt.

We had some celestial pyrotechnics and a nice shower in the morning in celebration of Independence Day. Some of our company joined in the services and contributed a patri-

otic song or two. We attempted no going abroad during the morning, but sat in the front porch and rested and watched the Yosemite fall, which seemed to be exactly opposite, as it does everywhere within half a mile above or below. We were too late in the season to see the fall at its best. The Yosemite creek, which forms it, rises in the Mount Hoffman group of mountains, about ten miles north of the valley. Being fed by snows, it does not retain its fullness long after this has done melting; but the great height of the fall makes it wonderful, even when the volume of water is not great. The whole descent is twenty-six hundred feet, but it is not all made at one leap. The water falls over a granite precipice sixteen hundred feet, where it meets a projecting ledge; then for six hundred feet, or what is equivalent to that in perpendicular descent, it falls in a series of cascades, and finally gathers itself up and makes its last plunge of four hundred feet. This, so far as is known, is the highest fall in the world, and is sixteen times the height of Niagara. It was very strange and curious to see the way the wind toyed with it. It was the uppermost sheet with which it seemed to like best to play. Sometimes the water was spread out, stretched from edge to edge, as if to see how wide it could be made; then it was brought close together, and looked like a film or mist — a something altogether supernatural. At times it was separated in the middle, and the divided parts hung down, with quite a space between, and danced hither and thither, one part chasing the other; sometimes coming almost together, and then separating again, as though a hand held each fast at the top, with the intention of showing it off, like a merchant displaying his goods to a customer. Then again the water

was gathered up and became all depth and intensity. Thus all the time, during the two or three days we were there, the fall kept changing, never looking twice alike, yet very beautiful in all its phases. The moonlight gave a new witchery to it, which was as beautiful as new. After luncheon we mounted our horses and retraced the steps of the night before, in order to see by daylight what we had seen so partially by moonlight.

For the sake of clearness I will begin the description of the valley at the western extremity, where it is entered by the different trails. The valley lies nearly east and west, opening toward the west. The Coulterville trail comes in on the north side and the Mariposa on the south side of the valley and of the Merced river. This is the narrowest part of the valley, it being scarcely a half-mile wide, while the rocks on each side are more than that in height. In some places there is scarcely room for the narrow trail between the river and the mountains. Entering on the Mariposa trail, the first object that arrests and fixes the attention is "El Capitan." This is an immense mass of granite, more than half a mile high, which makes a sharply-cut, almost rectangular, corner at the beginning of the valley on the north side. No words can give any adequate idea of its majesty as it stands there, a solid cliff of stone, with its top three thousand four hundred feet above the valley. The front face is not quite perpendicular, as the top projects over the base about one hundred feet. We, standing at its foot and looking up to its summit, seemed the least of all little things. I felt like bowing down to the earth and saying, with hushed voice:

"Great God! how infinite art Thou,
What worthless worms are we."

The granite is a light gray—lighter than the Quincy granite. The great face of the rock is bare, except that some trees were growing on two or three ledges at different heights. Seen from the valley, they were very diminutive, but are really good-sized pines. Near the corner of El Capitan there is a recess where the Virgin Tears fall is seen earlier in the season, but it was dry when we visited it. On the side of the rock facing southward and toward the valley there is drawn or cut the distinct outline of a man lying in a recumbent position. Some of our party having eyes saw not this image and superscription, but to the greater number it was a plain and real thing. Subsequently we learned whose these form and lineaments were, and why they were graven upon the rock. To assist in keeping the memory of Tu-tock-a-nu-lah in perpetual remembrance, I shall rehearse the legend, abbreviating the story as I find it in print:

This majestic rock was the throne of Tu-tock-a-nu-lah, who was a fit man for such a seat. Here he reclined while he administered laws to his people. Just and upright in all his ways, he allowed no oppression among his subjects. He was also strong and brave. No foot was so fleet as his; no arrow so true to its mark as the one sent from his bow. He could overtake the swift-footed deer in the chase, and his arrow found the heart of the bird in its flight. Even the grizzly bear was conquered by his strength, and forced to yield to its victor. Tu-tock-a-nu-lah lived so near to the Great Spirit, and was so loved

by him, that at his intercession rain was given to nourish the earth; the sunshine came to brighten the flowers and make the trees raise their heads every day nearer to heaven. So his whole care was for his people, and they were blessed under his reign. He was to them as a benefactor and a God. But to this mighty man there came a change. Stout as his heart was, there was in it a spot of tenderness. One morning, as he chased the deer from its cover, a vision appeared to his eyes — a maiden, fair as the morn, glorious as the sun and beautiful as the evening cloud, sat on the top of Tissayac, the Half Dome. Her hair was flaxen, with the tinge of gold upon it. She was not dark and swarthy, like the maidens among his people, but her face was like the white lily, with the blush of the rose upon her cheeks; her eye was the deep blue of the sky, and changeable as the clouds at evening — now deep, then pale it grew, as she looked down upon him from her high seat, four thousand feet above. To see her was to love her. He knelt down before her, as if to worship, and stretched his hand upward to entreat her favor. Love and pity were in her eyes as she regarded him. Then she spoke low, in a voice as sweet as the voices of the morning, and called his name twice: "Tu-tock-a-nu-lah! Tu-tock-a-nu-lah!" and was gone. To him the sun seemed to go out when she disappeared. After that he had but one thought, one care — to seek the lost Tissayac, his vanished love. Morning and night he sought her, and at noon he gave not up his quest. He forgot his people. He ceased to care for their interests. He no longer offered prayer and sacrifice to the Great Spirit. Offended at this neglect, the Great Spirit failed to send the rain

and did not give the sunshine. The grass withered, the flowers faded, and even the trees showed signs of suffering; the earth was dry and parched; the sound of sighing was heard in the tops of the pine trees. Tissayac saw and lamented this desolation. She knew that it was for her sake. She threw herself prostrate upon the top of her high home on the mountain and entreated the Great Spirit to be merciful, and send again the rain and the sunshine. The Spirit came, in majesty and terror, to answer her prayer. The mighty mountain was rent in twain, and the one half remains to this day as a witness to the wonderful answer vouchsafed to the prayers of a pure maiden.

This Half-Dome is still a marvel in the eyes of the people. The snows were melted in the valley, and the water came pouring down its sides. They formed a river — the river of Mercy,—which has ever since continued to flow through the valley. Then Tissayac took her flight, and was seen no more. But as she flew over the lake which bears her name the down from her wings dropped along the shore, and there sprang up white violets to gladden the hearts of all that should ever visit the lake. Tu-tock-a-nu-lah could not exist without Tissayac. He followed her from the valley, and was never seen again. But before he went, with his hunting-knife he cut in the rock whereon his throne had been, the outlines of his noble head and manly form,— not standing erect, as in the pride of strength, but almost prostrate, to show that even he had succumbed to a power mightier than himself; and he left the picture there, that all men might see and know that how brave and how swift soever they

THE SENTINELS, CALAVERAS GROVE.

(Each over 300 feet high.) Page 199.

may be, there is a very little archer who can conquer them by one dart from his quiver, and then — a woman may lead them! It is a pity that this fine Indian name, Tu-tock-a-nu-lah, which belonged to the rock, should have given place to the comparatively vulgar one of El Capitan, which is simply the Spanish for "The Captain." This wonderful mass of solid granite is nearly two-thirds of a mile high. It is the beginning of the wall of the valley on the north or left-hand side as you enter. On the opposite or right-hand side are the Cathedral rocks, and The Three Graces. Over the face of Cathedral Rock pours Bridal Veil creek, which rises a few miles southeast of this, and was an insignificant stream where we crossed it afterward, when going to Glacier Point. But the fall shows what grand results may be brought about by insignificant instrumentalities, when taken in hand by the Great Artificer. This little stream is led along by the hand till brought to the verge of this rock nine hundred feet above the valley; and then, in tossing it over, it is made such a thing of beauty as rarely blesses the eyes of mortal man. The water is no longer water; it is spiritualized, glorified; it comes over the shelving rock, white, ethereal as the mists of the morning, lighted up, irradiated by the rainbows that dance hither and thither, up and down, like myriads of iris-winged fairies. Of all the beautiful and unique things in Yosemite, to my eyes there was nothing so beautiful as the Bridal Veil fall. The falls of the Yosemite are more stupendous, the Vernal grander, and the Nevada more majestic and over-awing; but for the purely beautiful, that which soothes and sweetens and enchants the soul, there is nothing like the Bridal

Veil fall. Near the top it is pure gossamer, misty, and ethereal as a dream. There is nothing to which to liken it, for there is nothing like it. The veil of gossamer that conceals yet reveals the face of the bride has more the taint of earth upon it than this. Lower down there was every changing tint of the rainbow; now concentric and connected, then broken into a thousand fragments, that chased each other up and down and around like frolicsome children. Altogether, it was bewilderingly fair and lovely, a vision of beauty varied and ever varying, that can never fade away. To me it would have more meaning as a type of some of the beautiful things in the paradise above, than streets of gold or gates of pearl.

Turning an obtuse angle from the rock over which falls the Bridal Veil creek, we face the Cathedral rocks, not so high as El Capitan, nor so grand. They are enough like a cathedral to justify the name, especially when seen in connection with some rocks called Cathedral spires. These have different aspects, according to the points from which they are viewed. Sometimes they seem to be connected with Cathedral Rock, and really form the spires to that grand *simulacrum* of a cathedral such as never man built; then again they stand distinct and alone. The walls of the valley are of course continuous; it is only the prominent and peculiar peaks that are named.

Passing up the valley on the north side, beyond El Capitan, there are The Three Brothers. There is no danger that these brothers will not dwell together in unity; they are bound together by a bond which they cannot break, and which renders discord impossible. They are not all of the same size, though, so far as has trans-

pired, they are of the same age. Looking at these rocks from below, they are said to resemble three frogs in a row, ready to try their skill at leaping. This is thought to have suggested to the Indians the name of "Pompompasus," which means "Leaping-Frog Rocks."

On the opposite or south side, on the right hand, we next come to Sentinel Rock. I shall never forget how I felt when I first saw this cliff. It was dark when we reached the hotel, and in the morning, when I stepped out on the verandah, this was the first thing that met my view. It looked like a part of the everlasting hills that had been and was to be forever. It stood there, a grand mass of rock, stretching away up almost as far as the eye could reach, and then on the top was a slender obelisk still rising heavenward. It would seem as though a sentinel on the top of that rock could see into the very gates of heaven. "Wonderful! wonderful! wonderful!" I said, over and over again to myself. I could find no other word; there was room for no other feeling.

At Black's hotel we seemed to be exactly under the shadow of this great rock. The center appeared to be directly over us, and so it did for half a mile going up or down the valley. I noticed the same fact in regard to Yosemite fall. For a mile we seemed to be exactly under them. I suppose it was the effect of the exceeding great height. They were lifted so far above us that they seemed to be just in front for a long time. At Black's we were about midway in the valley; there being three miles above and three below. Behind the hotel Sentinel Rock raises its high head, as though it would penetrate the heavens. In front are the Yosemite falls.

These we watched at our leisure as we sat on the front verandah. We went over one day and climbed the rocks to the top of the lower fall. If "familiarity breeds contempt," as the old copy used to affirm, it is only true of small bodies. Nearness intensifies the greatness of the truly great. It was always so in the Yosemite — the nearer we came to any of its wonders, the grander and more incomprehensible they seemed. Looking at the Yosemite fall from our hotel, a mile or two away, it was hard to believe that it was really twenty-six hundred feet — almost half a mile — high. But when we came near and saw how great the height of the lowest and shortest fall is, we could believe in the magnitude of the whole. In other words, by dividing these unaccustomed heights and depths into fragments they were brought within our comprehension, and by taking in a part at a time we were enabled at last to grasp the whole. I do not know what magnitudes they would have attained had we remained long in the valley, for every day they grew in size and grandeur. The mind seems to require time to adjust itself to such unaccustomed heights, depths and dimensions — just as the eye, when it has been closely observing minute points, has to readjust itself before it can take in large objects.

The view from the top is said to be very fine, and I can well believe it. Crossing the river again on a bridge, we came to a saw-mill which is turned by the Yosemite creek, which, after making a water-fall that astonishes the nations, and surpasses all others in the world in height,— a water-fall which fills the eye of the beholder with wonder and the heart with delight,— is not above the

homely task of turning the wheels of a saw-mill in aid of man's invention and for his convenience. It seemed like harnessing the war-horse, with his arched neck and graceful form, to the dray, and making him do the work of an ordinary cart-horse. Yet there is the same lesson taught as by the angel who could fold his wings and prepare a cake for the servant of God, faint with hunger. That is the most excellent beauty that finds its end in use.

Two or three miles above Hutching's the valley loses its regularity. What had been a unit becomes triune. There are three narrow valleys instead of one. The river Merced runs through the middle valley. The Tenaya fork of the Merced finds its way through the northern valley, and the Illoulette through the southern. The North Dome is in the northern valley. It is an exceedingly high point, which is, as its name indicates, dome-shaped. The Half-Dome, on the other side of this narrow cañon, is the all-pervading presence of the Yosemite valley. Go where you will, look at the valley from what point you may, this wonderful Half-Dome is always visible, always grand and imposing. It is the highest point in the walls of the valley, outranking El Capitan by six or seven hundred feet. Its top has never been trodden by the foot of man. Since Tissayac forsook it, it has remained solitary in its grandeur. Nature has reserved one place at least for a shrine, which man's profane feet have been unable to penetrate. On the side toward the Tenaya cañon it is exactly vertical for two thousand feet from the summit. It has the appearance of having been a perfectly rounded and complete dome, which by some strange convulsion has been split in two and one part lost. It has an appealing look, and can

never be seen without the question arising, "Where is the other half?" The impression of this Half-Dome is one of the many that every visitor to the Yosemite will carry away and retain as a permanent possession. It is so unique, so wonderful, and tells so unmistakably of conflict. Not so massive as El Capitan, it is more suggestive in regard to great changes and powerful forces that have existed which could rend asunder masses of granite that look as though they would be a safe foundation for the heavens to rest upon. When did this fearful catastrophe occur? By what means was it brought about?

Going on up the north cañon, through which the Tenaya fork runs, we came to Mirror lake, which is merely an expansion of the creek. This little lake is remarkable only for the perfect shadows of the wonderful mountains and hills which surround it. All these are reflected with great faithfulness. You look from the original to the picture, and scarcely know which is which. But there is no merit in this; any other water would do just the same thing, if it had the same thing to do. The remarkableness was in the originals, not in the drawing. However, our opportunity for seeing it was not of the best. We neither saw it at the charmed hours of sunrise or sunset, which are said to be the times when it is finest. In fact we did not see it when the sun was over it, for the sun was out of sorts that afternoon, and did not show his face at all. Although we had a maiden in our party with brow as fair and cheek as rosy, eye as blue and hair as auburn as the fabled Tissayac, even she had not power to make the sun come from behind the clouds and show us the light of his countenance. So our party pretty

generally voted the lake a humbug, and our member from Vermont declared that he could find more respectable frog ponds at home! But to my eyes the shadows were strange and weird enough to pay for twice as long a ride as we had taken to reach the lake. The echoes, too, are said to be wonderful, and some of the company went out on the water and gave utterance to sundry unearthly sounds; but the remarkable echoes were gone away from home, or were too sound asleep to be waked. We heard no better response to the noises than could have been heard among any common hills.

Mirror Lake was the terminus of our explorations up the Tenaya cañon. We returned to our hotel, riding half the way through fields of fern that grew to the astonishing height of eight or ten feet. We gathered some very pretty flowers as we rode along, and brought them away as trophies. We returned to the hotel and resumed the pleasant task of watching the Yosemite fall. We could never tire of looking at it any more than the wind could tire of playing with it. One of the strange things about this fall is its vibratory motion. There is so much water that it does not break up into spray, but, while it is scarcely forty feet wide when it pours over the rock, it widens out to three hundred when it alights upon the projecting ledge which makes the base of the first fall, and this great mass of water swings back and forth from east to west, through a space of a thousand feet in width. As the water falls over, there are masses that whirl around like rockets as they descend. This is thought to be owing to the air that is caught and mixed up with the water. The Indians called this fall Yosemite, or Yo-

hanu-e-ta, which means "The Great Grizzly Bear," which to them has more of power and awfulness than anything else in the world; for, after death, if they have been bad Indians, they become grizzly bears, and are compelled to live among the snow on the mountains.

At ten o'clock in the morning we started for Snow's, at the upper end of the valley. Until a short time before our visit there was no way of egress from the valley but to return and pass out at the western extremity. But a trail had recently been made by which there can be an exit from the upper end of the valley. As we intended to go out that way, we had to take a last look at all this part through which we had been. We passed Glacier Point on our right. This rock is the angle formed by the south cañon entering the main valley, and from its summit there is the finest view to be had from any point. We kept the middle cañon, through which flows the Merced river. The recollection of no part of the trip gives me so little satisfaction as this ride up the valley. The scenery was so wild, so wonderful, and in some places so grand, that I would have liked to give a day to each mile, instead of hurrying through and seeing the whole in a few hours. But as we rode Indian file, and there were twelve of us, with the guide thrown in to make up the baker's dozen, no one could stop without deranging the whole procession, and there was nothing to be done but to go on and try to be satisfied with glimpses when we longed for lingering looks.

There is no sort of a performance that this Merced river is not capable of. Now it goes along gravely, like a respectable, well-behaved river; then it makes a leap of

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a hundred feet or so at a single jump, and again, tumbling, tossing, foaming like a mad creature, it goes over or around rocks as large as a house. Sometimes, after eddying, bubbling, boiling away as though an immense fire were under it, it suddenly changes its mood, and runs on with a hop, skip and jump, as though, after all, it was only in fun.

Whatever of wildness one can imagine, whatever of picturesqueness the fancy can paint, whatever of grotesqueness the thought can conceive — all can be seen in or along this river. These antics of the stream were not performed in silence, but were all set to music. Sometimes the rush and roar made a noise almost deafening; then, with the nicest diminuendo, it changed to a pleasant humming that soothed while it pleased.

Personal matters claimed a part of our attention and sometimes absorbed our interest. The trail led over rocks, and through rocks, and between rocks. We had to scale almost perpendicular heights and go down into apparently unfathomable depths. Any grades that we had had before seemed easy in comparison. The beautiful azalea that ornaments so many places in the valley was not wanting here. It grows larger, is more graceful, and the blending of pink and white in its flowers more beautiful, than anywhere else. Its beauty seemed to soften the general roughness of the scene. We reached at length Register Rock, where we dismounted. Near by is Lady Franklin's Rock, from which, looking upward, there is a good view of Vernal fall. Our guide told us that Lady Franklin came here and sat many hours in a seat which is still called by her name. From here we could have

walked across the gulch, ascended the stairs by the side of the falls, and been at Snow's in a little while. But, not wishing to lose any part of the wonderful scenery, we rode around two or three miles, and reached Snow's in a nice little shower.

After eating a dinner prepared by the hands of the enterprising Vermonter who presides over the "La Casa Nevada hotel," we started out to see the falls. We were between them at Snow's. The Nevada fall is half a mile above; the Vernal a little more than that below. We made our first visit to the latter, walking by the side of the Merced river all the way. In two miles, measuring from the top of the Nevada falls, the Merced descends two thousand feet; so that, after subtracting seven hundred feet for the Nevada fall and three hundred and fifty for the Vernal, there are still nearly a thousand feet left to be divided among lesser falls, cataracts and cascades. Many of these would be remarkable if they were not eclipsed by the greater wonders in the vicinity. Before reaching the cliff, the plunge over which makes the Vernal fall, the Merced gathers itself up into half its usual width, by way of preparation for the great leap that is before it. Then spreading out again just as it reaches the cliff, so as to make the most of itself, with all the power and impetus it has accumulated, it plunges over. The ledge over which it falls meets the northern wall of the valley at right angles, and, as if to furnish every convenience for seeing the wonderful fall, a parapet of granite breast high is placed on the south side. It projects over the fall, so that one can stand in perfect safety and look into the very face of the descending water. On the south side a staircase leads

down to the bottom of the fall. The descent is safe, and when down one can see into the very secrets of the waterfall. There is a grotto here, in which ferns and the delicate maiden-hair grow in luxuriance. The sun never shines in there; but what do they care for that? They are fed constantly on spray from the fall, and now and then a rainbow is served them by way of dessert; and their diet seems to agree with them. A softer and more beautiful green never was seen than that which they exhibit. One needs to gather one's senses about him when down in this chasm. The roar of the fall is deafening. The spray is everywhere. It fills your eyes and mouth, it creeps in at your ears, and it rests upon your face. The mists are about you like wreaths of smoke; you can hardly see through them. Feelings of awe, almost of dread, creep over you at this wonderful manifestation of power. But we were unfortunate in one thing — the sun refused to shine; so we did not see the rainbows. I shall, therefore, borrow the description given by a friend, who was there at a more propitious time: "We pass down an easy flight of stairs, which have recently taken the place of a rickety ladder, and reaching the landing, we pause to look up and around us. We find ourselves in a beautiful grotto, formed by a huge overhanging boulder, known as Arch Rock. This spot has never known the sunlight but by reflection. From every crevice and cranny droop the most exquisite bunches of ferns, among which is the delicate maiden's hair. The rocks are covered with patches of bright enameled moss, and the whole is kept constantly bathed in spray from the fall. As we pursue our way carefully down the uneven path, among rocks slippery with moist

earth and dripping moss, through an atmosphere of mist, which hangs about us like gossamer and fills the gorge, looking over our shoulder we realize that we are in a halo of glory. The entire background is one immense shimmering, sheeny curtain, resplendent with prismatic hues. There are rainbows to right of us, rainbows to left of us, rainbows encircling every tree and behind every rock. The fall itself is spanned by two clear and inexpressibly beautiful bows. All of them are perfect, not mere broken arches. One lies at our feet, or rather encircles them; rising upward, another spans our entire form. They sit on our foreheads; they encircle our eyes."

Loth to leave, yet compelled to go, we retraced our steps back to Snow's, and from there went to the Nevada falls. The ledge over which the Merced river falls here reaches entirely across the cañon, meeting its two sides at right angles. The fall does not cover the whole width of the cliff, although it is one hundred and thirty feet wide. On the north side there is room for a trail, over which we afterward went as we passed out of the valley. The Nevada fall is twice the height of the Vernal, and is the grandest of all the falls in the valley. The Yosemite is higher, the Bridal Veil more ethereally beautiful; but in this height and volume unite to make grandeur that astonishes and sublimity that overwhelms the mind. It will be remembered that both the Yosemite and Bridal Veil falls are made by comparatively insignificant creeks that come over the walls of the valley. It is only in the Vernal and Nevada falls that we see what the Merced river itself can do when it takes it into its head to make a leap. There is an obstruction on the north side of the fall which causes a di-

NEVADA FALLS.

(700 FEET HIGH.)

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version of a considerable volume of water, and makes it tumble by itself in frolicsome cascades, that come leaping and dancing down the rocks. There is no difficulty in going up to the very foot of the fall, and we stood there gazing at its magnificent power and listening to its stupendous roar until we were fairly drenched with the spray.

This was the end of our sight-seeing in the valley; but there remained some outside wonders for us to visit. After being very compactly stowed away in our inn during the night, we were up with the sun, to be ready for an early start to Cloud's Rest. This is a point but newly opened to tourists. The trail had been finished but a short time, and only three or four parties had gone there before us. Now came the hardest climb of all; we were obliged to go up the almost perpendicular ascent of the cliff to the north of the Nevada falls. We thought we had seen steepness before, but this quite cast in the shadow everything else. It seemed to go straight up, and we felt as if we had been ordered to charge upon a fortress that had been founded and built for the express purpose of keeping out all invaders. But nothing in the way of climbing was impossible to Alek and his compeers. If the Titans had had these mustangs to mount and carry them upwards, there is no knowing how far they would have gone in their attempt to scale the heavens. Up, up they went, with their heads almost at right angles with the earth, always finding some sure place in which to put their feet.

I gave myself no concern about my horse. I let him have the entire responsibility of keeping in the path of rectitude, and gave myself again wholly to the task of

trying to keep on his back. Before long this effort became too wearisome to be endured. I dismounted, threw the bridle over his neck and let him go. Walking was easier, and I had more chance to look about me. The Nevada falls were in full view on the right nearly all the time. On the left hand a grand mass of granite, isolated and apparently perpendicular on all sides, reared its majestic head more than two thousand feet above its base. This is the Cap of Liberty, called also Mount Broderick. Inaccessible as it looks, it is not altogether so. Persons with stout hearts and strong sinews have climbed to the top. On the south Mount Starr King makes a splendid monument to one whom all California loved, and whose untimely death is still lamented. After fairly reaching the top of the ledge the trail presented no uncommon difficulties. Cloud's Rest is the highest of the points attainable to the tourist in or around the Yosemite valley, being ten thousand feet above the level of the sea, and four thousand above the valley. Think of it — nearly two miles straight up in the air above the daily life of common mortals! There is no difficulty in the ascent except that the attenuated atmosphere makes breathing laborious. The view was fine as well as extended. On one side we looked down into the Yosemite valley, which lay spread out like a map below us. There seemed a strange influence over and around us. The canopy above us did not wear its usual look, but was of a deeper blue and grander aspect. We felt that we were nearer heaven than we had ever been before. But the time of our transfiguration had not yet come; we must return to sublunary things. We mounted our horses and set out on our return, retracing the steps we had taken in going.

For three miles we went through the "little" Yosemite valley, which is two thousand seven hundred feet higher than the Yosemite valley proper. This, too, is hemmed in by columnar walls of granite, and is only "little" because the other is greater. It is beautifully shaded by fir and pine trees, with tamaracks interspersed, and is carpeted with the greenest of green grass. This valley extends to the upper edge of the Nevada falls.

We found our mule Jocko and the lunch all safe and waiting for us on the bank of the Merced river, just above Nevada falls. It was then one o'clock, and we had been riding since six in the morning. Of course lunch was a matter in which we felt a lively interest. The company assembled and seated themselves on the grass under the shade of overhanging trees, with the murmur of the flowing river sounding in our ears. The lunch was opened. Blank astonishment and indignant surprise took the place of pleasant expectation. Truly, our thrifty Vermonter at La Casa Nevada, like Mrs. Gilpin, had a "prudent mind." The lunch, which had been paid for "sight unseen" was both meagre and poor, and caused the only burst of indignation shown by our good-natured party during the whole expedition. But anger was useless and resentment was vain; neither would multiply our loaves or butter our bread. So after sitting on the bank of the river for a while, watching the river get ready for its great plunge just below, we mounted again and started for Peregoy's.

The sun had found its rest before we reached ours. Supper was soon ready, with its toothsome viands. The cream pies that had haunted the memory of some of our party all the time we had been gone, were not wanting.

The next day was Saturday, and in the morning we went to Glacier Point and Sentinel Dome, which gave us a ride of twelve miles. On our way we crossed Bridal Veil creek only half a mile above the fall. Even so near its transfiguration it is an innocent, insignificant-looking stream. Glacier Point is on the south side of the valley, just in the angle where it branches into three. The view from this point is by common consent the finest to be had of the entire valley. The Nevada, Vernal and Yosemite falls are all in full view. The Bridal Veil fall, being on the same side, is hidden by some projecting peaks. The great South or Half Dome looms up and arrests the eye at every turn. Mirror lake shines in the distance. Lemon's orchards, which are quite large and contain full-grown trees, look like patches of shrubbery. Men in the valley look like insects, and even horses can scarcely be distinguished, except when in motion; yet every feature, every lineament of the valley is distinctly seen. A projecting rock affords a place where the beholder can go to the very verge and look into the secret places of the valley, if the nerves can be trusted; but one scarcely wishes to stay there long; the head grows dizzy, and the heart aches with the fullness of its emotions. With a lingering gaze, and with such feelings as arise when we take the last look at the face of a dead friend whose influence has ennobled, whose aspiration has elevated us, we turn away. But this look is not our last; we are to have one more view. A ride of about a mile brought us to Sentinel Dome. This point is farther back from the edge of the valley, in the rear of Sentinel Rock. From here, also, we had a view of all the principal falls except the Bridal Veil, and of

all the prominent peaks; but the sight is less clear and distinct than from Glacier Point. We strained our eyes to see what we feared we should never see again; then we turned to go; and this was the last. This magnificent vision must henceforth be a memory, a picture that will endure while life lasts, and always be the symbol of power, of grandeur, of glory, and of immortality!

Our Sabbath at Peregoy's had an added pleasure in the arrival of a large party bound for the Yosemite valley, among whom we were glad to recognize those whom we had known in other days, whose presence was a delight. There was a preacher among them, who added to the interest of the occasion by holding an evening service and delivering an appropriate sermon.

Our return was over the same road that we went, and was without incident or adventure.

Thus ended this memorable and interesting trip. I do not know anything for which I would barter the experiences it brought into my life, if there could be secured to me no chance to replace them. To be sure there were fatigue and hardship connected with it; but when one is paid down for all that is suffered, and paid so amply, it would surely be unreasonable to complain.

The circumstances were propitious. Fellow-travelers were not only agreeable, but generally disposed to take things as they came, and make the best of them without fault-finding or complaint. We were fortunate in our guide; Captain Folsom was familiar with all the localities, and ready to tell what he knew to those who wanted to hear. He was one of that military company which followed the Indians into the valley in 1851, and therefore

among the first white men that saw it. He has spent much of the time since in guiding visitors in and around the locality. Always obliging and considerate, he is especially so to ladies. Captain Folsom is the prince of guides! Let those who would see the Yosemite aright secure his services, if they can.

I cannot close my narrative without also saying a good word for Alek. I dare not commend him for his swiftness, but there are those who believe in the old maxim that safety is better than speed. To such his services would be desirable. I am not sure that I can truthfully say I think his judgment infallible; at least, I should not compliment myself in doing so. I am quite sure that to this day he looks upon me as a chicken-hearted individual who habitually carries her heart in her mouth and does not dare say her soul is her own if anyone asserts to the contrary. Differing widely in opinion on this point, as I did, I never could persuade him to change his views and come over to my belief. But even this error only shows how much persistency he has, and how great a regard for that jewel, consistency. At any rate, I forgive him his mistake, and remember gratefully that he carried me safely over frightful places — up and down perpendiculars that the uninitiated would have pronounced impossibilities of accomplishment. May his life be long and his shadow never grow less! and may his last days be spent in green pastures through which run streams of living waters, so that he may eat and drink at his pleasure until he lies down to rest with "the kings and conquerors of the earth!"

No one can see this wonderful valley, or even read an

account of it, without wondering how it was formed — without asking by what catastrophe this chasm, which crosses the general depressions of the mountains at right angles, could have been caused. There have been many theories in regard to its formation; but Professor Whitney, the State geologist, is perhaps better entitled to credence than any who have written upon the subject. After stating the three ways in which valleys are formed, viz.: by erosion, by fracture, and by subsidence, he shows conclusively that this valley could not have been formed in either of the first two ways, and must, therefore, have been caused by the third — subsidence. Something gave way beneath and the valley sank down. In other words, the under-pinning broke and the bottom dropped out. The middle part was swallowed up, like Korah and his troop. Subsequently the wash from the mountains in part filled up the opening and smoothed over the surface. There is evidence that the cavity was originally filled with water. But when the glacial period ended, and the time for drying came, the water diminished, the valley filled up until only a narrow channel, in which flowed the Merced river, was left, and the present conditions were obtained.

Until recently the Yosemite valley was believed to be altogether unique — the only one of the kind in all the wide world. But another has been found in this wonderful region, so like it that there seems to have been one model for both; only the scale is diminished, as though Nature had tried her 'prentice hand on this before attempting the greater Yosemite. This smaller valley is sixteen miles northeast from the Yosemite in the high Sierras, and on the Tuolumne river. It is called the Hetch-hetchy.

It is about the same height above sea-level as the Yosemite. The valley is three miles long, extending, like the Yosemite, from east to west. The walls are not so high as those of the Yosemite, and everything is on a smaller scale.

There have been many improvements made in the modes of reaching the Yosemite valley since the visit was made of which an account has been given. By four different routes the wheels of carriages now carry the tourist from the terminus of the railroad to the door of any of the hotels in the valley. In consequence of improvements in roads it can be visited earlier in the season. The time required for the trip is also less. The valley can be reached in three days from San Francisco. But let no one who wishes to see the valley well stay there less than a week, and if the one week can be multiplied by four the visit will be all the more satisfactory.

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